NASA TECHNICAL REPORT

NASA TR R-407

NASA TR R-407

ESTIMATES OF THE MOON'S GEOMETRY USING LUNAR ORBITER IMAGERY AND APOLLO LASER ALTIMETER DATA

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION • WASHINGTON, D. C. • OCTOBER 1973

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
NASA TR R-407		

4. Title and Subtitle	5. Report Date
ESTIMATES OF THE MOON'S GEOMETRY USING LUNAR ORBITER IMAGERY AND APOLLO LASER ALTIMETER DATA	October 1973
	6. Performing Organization Code

7. Author(s)	8. Performing Organization Report No.
Ruben L. Jones	L-8797
	10. Work Unit No.
9. Performing Organization Name and Address	383-09-54-01
NASA Langley Research Center Hampton, Va. 23665	11. Contract or Grant No.
	13. Type of Report and Period Covered
12. Sponsoring Agency Name and Address	Technical Report
National Aeronautics and Space Administration Washington, D.C. 20546	14. Sponsoring Agency Code

15. Supplementary Notes

16. Abstract

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17. Key Words (Suggested by Author(s))	18. Distribution Statement
Selenographic coordinates Lunar radii Lunar ellipsoid Moon's size and shape Geometry of the Moon	Unclassified – Unlimited

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price*
Unclassified	Unclassified	59	Domestic, $3.50 Foreign, $6.00

*For sale by the National Technical Information Service, Springfield, Virginia 22151

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SUMMARY

Selenographic coordinates for about 6000 lunar points identified on the Lunar Orbiter photographs are tabulated and have been combined with those lunar radii derived from the Apollo 15 laser altimeter data. These coordinates were used to derive that triaxial ellipsoid which best fits the Moon's irregular surface.

A total of 12 different estimates of the lunar geometry were obtained by using these data. Six cases used both sources of data whereas the remaining six cases used the data from the Lunar Orbiter imagery only. When the displacement of the ellipsoidal center in the direction of the Earth was assumed to be zero, those cases using the Lunar Orbiter imagery compared favorably with the corresponding cases using all the data. The six cases using all the data were most consistent. For these cases, restrictions on the axial orientation of the ellipsoid changed the results only slightly.

For the unconstrained ellipsoid, the axial magnitude in the direction of the Earth a was found to be about 1737.6 km whereas the value for the spin axis c was 1735.0 km and the value for b was 1735.6 km which correspond to a mean radius of 1736.1 km. These axes were nearly parallel to the Moon's principal axes of inertia and the origin was displaced from the Moon's center of gravity about 2.0 km in a direction away from the Earth and to the south of the lunar equator.

INTRODUCTION

A precise estimate of the Moon's geometry has been a major objective of many scientists. These investigations have, however, been limited by an inadequate distribution of observations over the whole surface of the Moon. Further, confinement to the Earth's environment has limited the precision of these measurements. The current study is an effort to overcome many of these objections by combining two unique sources of data: the Lunar Orbiter imagery and the Apollo laser altimeter measurements.

The Lunar Orbiter imagery and the Apollo laser altimeter represent two independent sources of data. Upon examination, however, the horizontal and the vertical uncertainties associated with each are about the same order of magnitude. Further, the Apollo data are not limited to the Moon's front side as the Lunar Orbiter data are. Hence, these two sources of data can be combined to eliminate the ill-conditioning along the Earth-Moon line which is associated with those solutions based on only front-side data. These coordinates are used to compute the dimensions, the orientation, and the displacement of that triaxial ellipsoid which would best fit these data.

SYMBOLS

a,b,c	mutually orthogonal semiaxes of the triaxial ellipsoid
$\overline{B}_{1,2}$	vector difference between two spacecraft radial vectors
$C_1,\overline{C}_2$	functional relations for conditions of mutually orthogonal axes
G	functional relation between selenographic coordinates of point and axial magnitudes, axial direction cosines, and displacement of center of triaxial ellipsoid
m,n	upper limits on summations
N	total number of points within given region on Moon's surface
P	particular lunar point
$\overline{R}_1,\overline{R}_2$	spacecraft radius vectors
r_p	selenographic radius to a point on the Moon's surface
W	functional relation representing weight to be assigned to coordinates of point
w	number representing confidence in estimated selenographic coordinates of lunar point
X,Y,Z	axes of selenographic coordinate system
X',Y',Z'	axes of ellipsoidal coordinate system
x,y,z	selenographic coordinates of point on Moon's surface

x', y', z'	ellipsoidal coordinates of point on Moon's surface
$\Delta x, \Delta y, \Delta z$	components of displacement of ellipsoidal center relative to Moon's center of gravity (c.g.)
ϵ	random uncertainty or residual in functional relation
λ	selenographic longitude
ρ	vector projections of image through lens of camera
σ	standard deviation of mean
φ	selenographic latitude

Subscripts:

a,b	axes of ellipsoid
g,c	dummy indices denoting functional relation being considered
i	point number
j	region containing point
max	maximum

Notation:

$\hat{}$	unit vector
$\bar{}$	vector

DESCRIPTION OF DATA

The purpose of this paper is to find that triaxial ellipsoid which will best fit the Moon's irregular shape. To achieve this objective, coordinates for about 6000 positions on the Moon were used in the analysis. These points were taken from both Lunar Orbiter photographs and Apollo laser altimeter data. For the Lunar Orbiter photographs, data

points were located between $\pm 60^{\circ}$ in both latitude and longitude and were concentrated within the various Lunar Orbiter sites. The approximate positions of these sites are indicated by the shaded areas in figure 1, and coordinates for those points in each site are given in the appendix. When two or more sites were sufficiently close, only one block (shaded area) was constructed to represent these neighboring sites. For the laser altimeter, positions were confined to those points along the trace of the Apollo orbit on the Moon's surface (see fig. 1). The inclination of this orbit is about 25°.

The Lunar Orbiter and Apollo data are similar. However, points from these two sources are determined differently. Hence, the reduction technique and the associated error for each source is discussed briefly.

Lunar Orbiter Imagery

Each Lunar Orbiter site was composed of a series of overlapping photographs (sequences) which were exposed during one orbital pass. The number of photographs, as well as the percentage of overlap (from about 50 percent to about 80 percent), varied with each site as well as each mission. When the percentage of overlap was large, a point was observed in several photographs. In some instances, a point was identified about nine times within a particular sequence of photography. Further, the identity of a point was preserved when two or more sequences of photographs overlapped. (See refs. 1 and 2.) Hence, there is a duplication of points in the appendix.

The analytical stereophotographic technique used to compute the selenographic coordinates from the Lunar Orbiter imagery is discussed in references 1 and 2. This technique relies heavily on two basic assumptions: (1) The three components of the spacecraft attitude (pitch, roll, and yaw) were assumed to remain fixed in inertial space during each photographic sequence and (2) the spacecraft position is assumed to be known at each photographic exposure time. The first assumption is valid for two reasons. First, the spacecraft guidance system went into an inertial hold mode after being appropriately oriented for each photographic pass. Further, the attitude drift rates for the spacecraft were very small. Hence, since the camera was fixed relative to the spacecraft, then the camera attitude angles (tilt, roll, and swing) are essentially fixed relative to the fixed stars. The second assumption, however, is more questionable. Although the science of orbital determination has become quite sophisticated, errors in position are still present for a variety of reasons. Even so, errors in the spatial positions of the spacecraft can be minimized if care is exercised in evaluating these parameters. The spacecraft position at the time of each photographic exposure along with the other photographic support data were carefully evaluated by the Boeing Company (refs. 3, 4, 5, and 6). These positions were determined from data arcs which were computed by using the orbital tracking data from three orbital

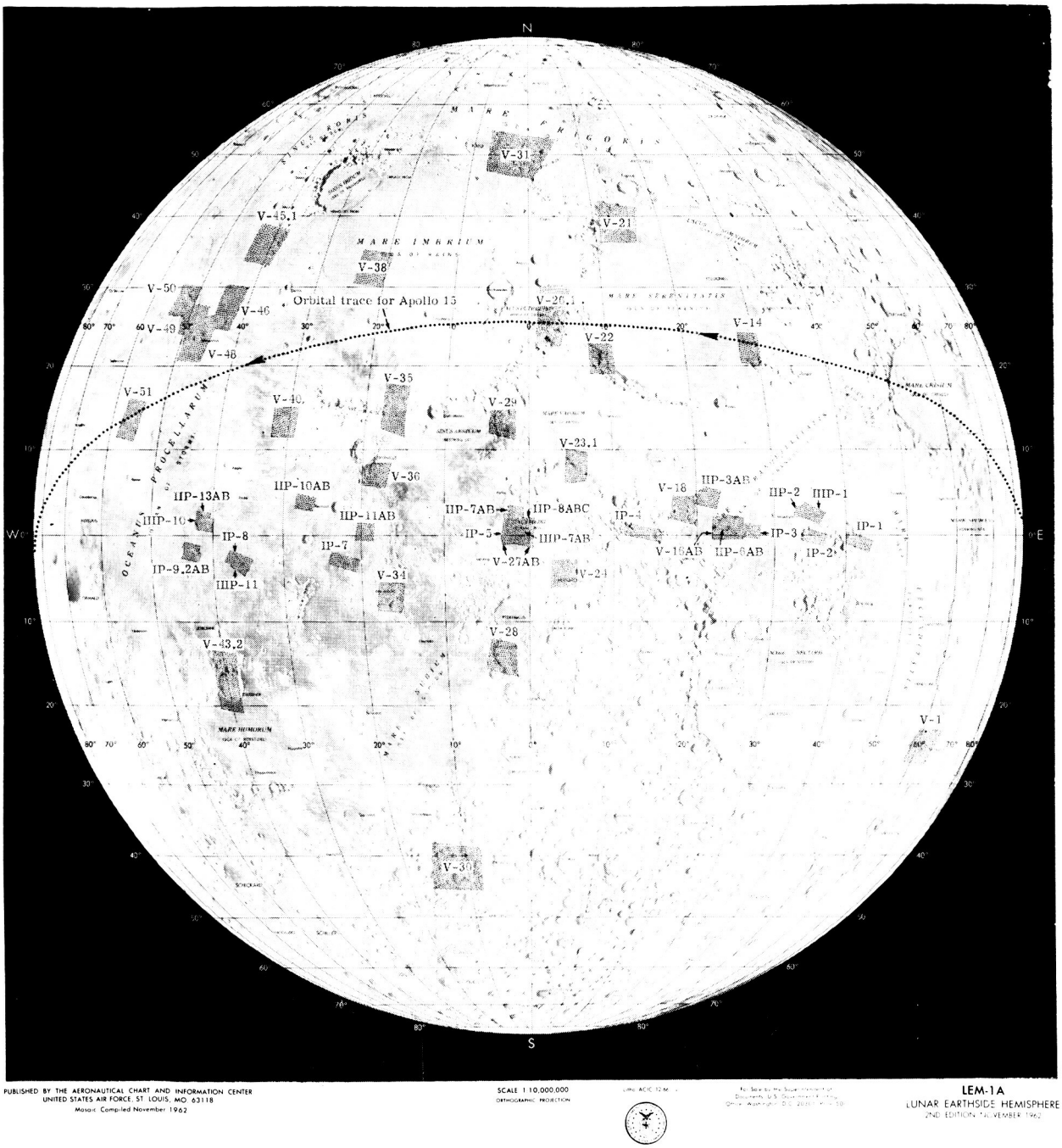

Figure 1.- Distribution of Lunar Orbiter photographic sites over visible lunar disk.

tracking stations. These techniques were similar to those used to determine similar information for the Apollo data. This source of error is discussed more fully elsewhere in this paper.

The importance of these assumptions to the stereophotographic technique is clearly seen in figure 2. In this figure the basic triangulation used to obtain the position of a particular feature P is shown. For the purpose of explanation, it is expedient to discuss only one combination of photographs (stereopair) to which the lunar point is common. However, it is to be remembered that a particular point is common to many different photographs and many different points are identified in a given sequence of photography.

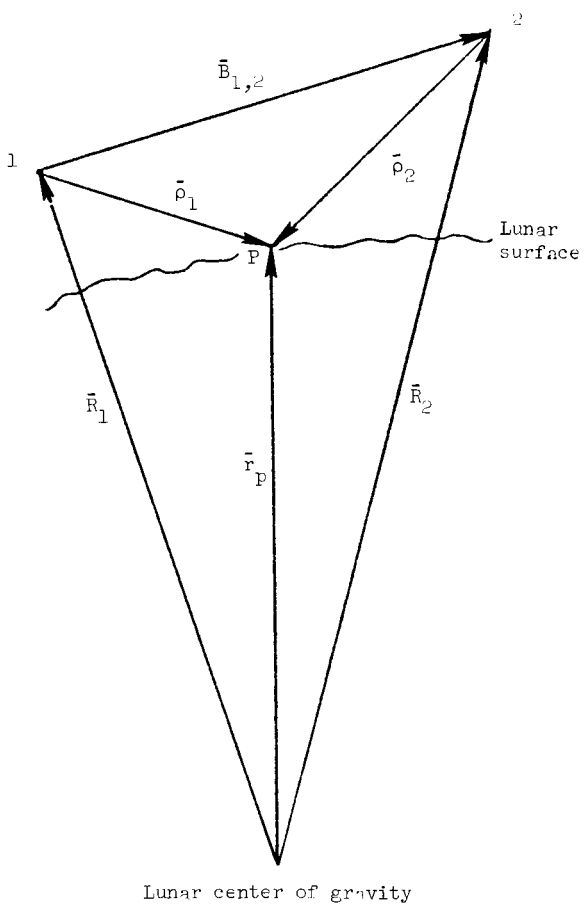

Figure 2.- Basic triangulation for one pair of Lunar Orbiter photographs.

The selenographic coordinates of a point can be determined by vector addition. In the figure, the numerals 1 and 2 represent two spacecraft positions where the lunar point P was photographed. Since the spacecraft radius vectors $\overline{R}_1$ and $\overline{R}_2$ are assumed to be known, $\overline{B}_{1,2}$ is known. Further, since the vectors $\bar{\rho}_1$ and $\bar{\rho}_2$ are projections of the image of P through the lens of the camera, these vectors can be computed from the observed film coordinates of the image of P, from the calibrated camera focal length, and from the camera spatial attitude.

Now, this technique depends on knowing the camera spatial attitude. This attitude is estimated by perturbing the attitude about the nominal in such a way as to find that most probable attitude which will minimize the sum of the squares of the distances between all combinations of ρ vectors for each point, and summing over all the points. In this fashion the camera attitude is estimated for each orbital pass. Further, according to the first assumption, it was not allowed to change within a particular orbital pass. However, when two or more sequences of photographs were considered concurrently, a different attitude was obtained for each sequence. These attitudes were then used to compute the mean selenographic coordinates for each feature. For a detailed discussion of this technique, see references 1 and 2.

The orbital uncertainties do not affect the estimated selenographic coordinates as much as might be expected. These uncertainties will affect the estimate to the absolute positions of the points. The relative positions, however, will remain essentially unchanged. Now, this absolute uncertainty in the radius vector is predominantly in the horizontal direction. Further, since the absolute uncertainty in the orbital position is about 1 km (refs. 3, 4, 5, and 6), this uncertainty translates into a maximum 3σ uncertainty of about ± 4.5 km at the Moon's surface. This is equivalent to about $\pm 0^{\circ}.15$ of arc. Although this uncertainty in position can affect the estimate of the Moon's geometric size and shape, its primary effect is limited to the orientation of that ellipsoid. The size and shape of the ellipsoid is affected primarily by the uncertainty in the selenographic radius. In references 1 and 2, this uncertainty was estimated to be about ± 200 meters.

Apollo Laser Altimeter Data

The Apollo laser altimeter results are from one orbital pass. These points were obtained from table I in reference 7. These measurements were obtained by using a ruby laser altimeter. Range measurements were made about every 20 seconds and the resolution of these measurements was about 1 m. Further, the spacecraft altitude ranged between 95 and 119 km. These measurements were obtained around the entire Moon and were confined to that region between $+25^{\circ}$ and -25° of latitude.

As pointed out in reference 7, an accurate estimate of the spacecraft position with respect to the Moon's center of gravity was required at each measurement time. This

requirement is similar to the second assumption mentioned previously (the spacecraft position is assumed to be known at each Lunar Orbiter exposure time). Therefore, the horizontal uncertainty in each measurement should be about the same order of magnitude as that obtained by using the Lunar Orbiter imagery, that is, $0^{o}.2$.

An additional source of error is encountered when the altimeter slant range is converted to altitudes above the lunar surface. This is usually accomplished by accounting for the deviations of the altimeter pointing angle from the spacecraft local vertical. In reference 7, these corrections were not applied to those data. This and the uncertainty in orbital position comprise the two primary sources of error for these data.

The total effect of these error sources on the laser altimeter data is comparable to the corresponding error in the Lunar Orbiter data. The estimated uncertainty associated with the selenographic position of the laser altimeter points was $0^{o}.2$ (ref. 7) in both latitude and longitude (the horizontal uncertainty) whereas the estimated uncertainty in the absolute radius of these points was about ±400 m (the vertical uncertainty). According to reference 7 a comparison was made of these radii with independently derived values for three small craters: one in Mare Smythii; one in Mare Serenitatis; and one in Palus Putredinis. The altimeter-derived radii agreed with those values to within 100 m. Since the vertical uncertainty for the Lunar Orbiter imagery was estimated to be about ±200 m, a similar comparison is anticipated for those data.

The laser altimeter altitudes were determined relative to a mean sphere of 1738 km. Those heights determined for the Apollo 15 are shown in figure 3 (taken from ref. 8). As can be seen, the elevations range from about -4 km on the Moon's front side to about +4 km on the Moon's back side. The actual tabulation of these heights is given in reference 7.

These two sources of data (the Lunar Orbiter imagery and the Apollo laser altimeter) are expected to provide a better fit in the solution to the ellipsoid. The horizontal uncertainties are roughly the same. Also, the vertical uncertainties are of the same order of magnitude. Therefore, the selenographic coordinates derived from both sources can be combined and can be treated as though they were one data source. Then, the combined sources of data will complement each other. The Apollo data were limited to the trace of the Apollo orbit on the Moon's surface. These data, however, were not limited to the Moon's front side. Hence, these data will help to control both the magnitude and the direction of that semiaxis which is in the Earth-Moon direction. But the Apollo data alone are not adequate to determine the best fitting ellipsoid. That is, wider distribution of points is needed. The Lunar Orbiter data provide a wide distribution of points over much of the lunar front side. Thus, the two sources taken together do provide an adequate distribution of points over the Moon's surface, and the best fitting ellipsoid can be derived.

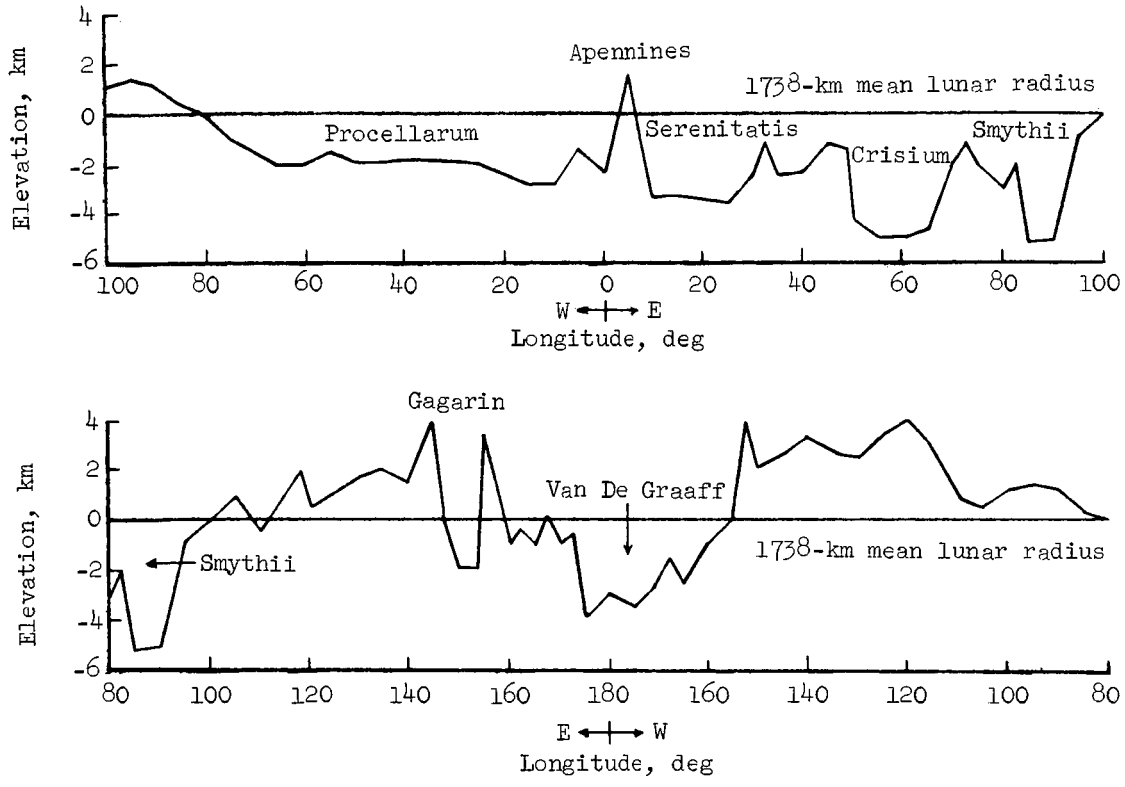

Figure 3.- Apollo 15 laser altimeter profile.

COMPUTATIONAL TECHNIQUE

The data described in the preceding section were used to compute that triaxial ellipsoid which best fits the Moon's irregular shape. The computational technique used to achieve this goal relied on the theory of least squares. Although the analytical method used is not unique to this paper, some discussion of both the method and the equations is given in functional form. Hence, the basic problem is discussed first. The method for weighting the data as well as other computational difficulties is discussed later.

Setting Up the Problem

In studies of this type (refs. 9 and 10), the triaxial ellipsoid is usually represented mathematically by its quadric form. However, in the present study, an expanded form of the general equation for a central ellipsoid was used. Two coordinate systems are required to describe this approach.

The first coordinate system is a selenographic coordinate system (ref. 11). This system is defined to be right handed and Moon fixed. Its origin is at the Moon's center of gravity, and the XY-plane is parallel to the Moon's equatorial plane. The Z-axis is

parallel to the Moon's spin axis and the X-axis is positive in the direction of the Earth and passes through the Moon's central bay (Sinus Medii). These axes are by definition the same as the Moon's principal axes of inertia. (See ref. 11.)

A second coordinate system is the ellipsoidal coordinate system. This system, also, is right handed. The origin of this system is defined to be at the center of the ellipsoid. Further, the axes X', Y', and Z' are defined to be both parallel to and coincident with the ellipsoidal semiaxes a, b, and c; that is, X' is parallel to a, Y' is parallel to b, and Z' is parallel to c. Thus, within this system, the ellipsoidal axes a, b, and c are represented by their magnitudes.

These two coordinate systems are the only ones used in this paper. The selenographic system is the one used to tabulate those coordinates in the appendix and is the primary frame of reference for all computations. However, the ellipsoid is defined within the ellipsoidal system.

Within this system, the general equation for a triaxial ellipsoid is

$$\left(\frac{x'_{i,j}}{a}\right)^2 + \left(\frac{y'_{i,j}}{b}\right)^2 + \left(\frac{z'_{i,j}}{c}\right)^2 - 1 = 0 = G_{i,j}(x',y',z',a,b,c) \tag{1}$$

In this expression $x'_{i,j}$, $y'_{i,j}$, and $z'_{i,j}$ are the coordinates of the ith feature (a point) in the jth region relative to the ellipsoidal coordinate system. The selenographic coordinates of this same point are simply $x_{i,j}$, $y_{i,j}$, and $z_{i,j}$.

Points on the Moon's surface are given in selenographic coordinates. But, these coordinates are related to the ellipsoidal coordinates through a coordinate transformation. Hence, the ellipsoidal coordinates $x'_{i,j}$, $y'_{i,j}$, and $z'_{i,j}$ are simply functions of the direction cosines of a, b, and c; of the selenographic coordinates of the ith point $x_{i,j}$, $y_{i,j}$, and $z_{i,j}$; and of the displacements of the ellipsoidal center Δx, Δy, and Δz. In this manner equation (1) was expanded into a form similar to that of a general quadric. The expanded form of equation (1) is still represented by the function $G_{i,j}$. The least-squares method can now be used to estimate the ellipsoidal size and shape of the Moon's surface. Since the function $G_{i,j}$ is nonlinear, it is linearized by using a first-order Taylor expansion of the function $G_{i,j}$. Thus, if $G'_{i,j}$ represents an approximate value for $G_{i,j}$ and $dG_{i,j}$ represents an array of first-order partial derivatives, then

$$G_{i,j} = G'_{i,j} + dG_{i,j}$$

represents the first-order Taylor expansion of $G_{i,j}$, and

$$\epsilon_{g,i,j} = G_{i,j} - G'_{i,j} = dG_{i,j} \tag{2}$$

represents one of the error equations required in the least-squares solution.

Other expressions are obtained from those equations of conditions which insure that the vectors $\bar{a}$, $\bar{b}$, and $\bar{c}$ are mutually orthogonal. These conditions are made necessary by the nature of the transformation (ref. 12). They are

$$\bar{a} \cdot \bar{b} = 0 = C_1 \qquad \left(\hat{a} \times \hat{b}\right) - \hat{c} = 0 = \overline{C}_2 \tag{3}$$

where the bars over the symbols indicate that these variables are vector identities; and the hats ($\hat{}$) indicate unit vectors. Since the functions C_1 and $\overline{C}_2$ are nonlinear, each of equations (3) is expanded into first-order Taylor series in a manner similar to that for expanding $G_{i,j}$. Thus, if $\epsilon_{c,1}$ and $\epsilon_{c,2}$ are the residuals for each condition, then

$$\epsilon_{c,1} = dC_1 \qquad \bar{\epsilon}_{c,2} = d\overline{C}_2 \tag{4}$$

and

$$\sum_{j}^{n} \sum_{i}^{m} \left(\epsilon^2_{g,i,j} + \epsilon^2_{c,1} + \left| \bar{\epsilon}_{c,2} \right|^2 \right) = \text{Minimum} \tag{5}$$

is the least-squares condition for which a solution is to be found.

Weighting the Data

In order to weight the data in the appendix adequately, the Moon's surface was subdivided into regions having equal surface areas. Each region was computed as though it were located at the Moon's equator. That is, the surface area embraced within a region is independent of latitude. The size of each was equivalent to a 10° by 10° solid angle. In this fashion the data are grouped according to its location on the Moon. Hence, those regions with large numbers of points can be weighted differently from those with only a few points. Thus, the triaxial ellipsoid can be made more representative of the whole lunar surface. More is said later with regard to this technique of weighting.

In each instance, the coordinates for each point determined from the Lunar Orbiter imagery were assigned numbers $w_{i,j}$ and $\sigma_{i,j}$, where i is the point number and j is the region containing the point. The first number, $w_{i,j}$, was proportional to the number of stereopairs containing the point. The second number, $\sigma_{i,j}$, is the standard deviation

of the mean for the point and is obtained directly from the digital computer program used to compute these coordinates. It is the root mean square of the deviation of the radius from a mean value. As a rule, $\sigma_{i,j}$ is small (less than 20 meters) and tends to indicate the precision with which both the attitude of the Lunar Orbiter camera and the height of the Lunar Orbiter spacecraft above the Moon's surface were estimated. Both of these values tend to indicate the degree of confidence which can be placed in the coordinates of each point. Hence, they are used to weight each point in this analysis.

If the Apollo altimeter data are included with that of the Lunar Orbiter imagery, it must be treated fairly. Now, the weight assigned to each of the Lunar Orbiter points is dependent on the numbers $w_{i,j}$ and $\sigma_{i,j}$. Therefore, since these two sources of data are assumed to be compatible, then $\sigma_{i,j}$ and $w_{i,j}$ for each of the altimeter points are assumed to be equal to the average of these values for all the Lunar Orbiter points.

A weighting function $W_{i,j}$ was used to systematically weight the different concentrations of points within different regions on the Moon's surface. The function was empirically derived and depends on the total number of points N_j identified within the jth region of the Moon's surface, the standard deviation of the mean $\sigma_{i,j}$, and the number $w_{i,j}$. That is,

$$W_{i,j} = \frac{w_{i,j}(\sigma_{max} - \sigma_{i,j})}{\sigma_{max} N_j}$$

where

$$\sigma_{max} - \sigma_{i,j} > 0$$

is the boundary condition. As can be seen, no estimate with a standard deviation greater than or equal to a preassigned maximum σ_{max} was accepted in the analysis. Further, as the number of estimates N_j within a region increased, the weight decreased.

Within the weighting function, the number of points N_j within each 10^o by 10^o square segment of the lunar surface (region) was incremented each time a point was included in the jth region. Thus, N_j is the current number of points included in the jth region. The net effect of N_j within the weighting function is to minimize the effect of the different groupings of lunar points by assigning the weights to the points on a regional basis. Thus, since weighting decreases as N_j increases, those regions with only a few points are not dominated in the least-square solution by those regions with large concentrations of points. In this fashion, the triaxial ellipsoid is made more representative of all the regions.

Other Computational Considerations

Since $\sigma_{i,j}$ was seldom found to exceed ±20 meters, σ_{max} was generally set at this value. However, in rare instances an entire sequence of photography consistently yielded values for $\sigma_{i,j}$ of about ±40 meters. Since all other indications showed these data to be good and worthy of inclusion in the estimate of lunar size and shape, σ_{max} was allowed to increase above the ±20 meter value for that sequence only.

RESULTS AND DISCUSSION

Several considerations for positioning the triaxial ellipsoid were assumed and are given in table I. The cases within table I are divided into two groups. For the first group, the ellipsoidal center is not constrained in position relative to the Moon's center of gravity (see fig. 4). For the second group, however, the ellipsoidal center is constrained in one or more components of its displacement relative to the Moon's center of gravity. Within both groups, restrictions are imposed on the orientation of the ellipsoidal axes relative to the Moon's principal axes of inertia (selenographic axes). However, within group 2, the primary emphasis is on restricting the displacement of the ellipsoidal centers in some fashion.

TABLE I.- CONDITIONS FOR POSITIONING THE TRIAXIAL ELLIPSOID

Group	Case	Constraints
1	1	A free-floating ellipsoid
1	2	The Z-axis of the Moon and c-axis of the ellipsoid are parallel
1	3	Ellipsoidal axes are parallel to the principal axes
2	4	Ellipsoidal center is at the center of gravity; $\Delta x = \Delta y = \Delta z = 0$
2	5	The Z-axis and c-axis are parallel; $\Delta x = 0$
2	6	Ellipsoidal center is constrained to the YZ-plane; $\Delta x = 0$

There are similar cases within both groups. Case 1 in group 1 is similar to both cases 4 and 6 in group 2. These ellipsoids are not constrained in orientation. Similarly, case 5 is like case 2. These ellipsoids are constrained so that the ellipsoidal c-axis is parallel to the Moon's spin axis Z. This is the condition which should be imposed when it is desirable to compute selenodetic positions (latitudes and longitudes of points). For these cases where the c-axis is parallel to the Moon's spin axis Z, selenodetic latitudes and longitudes take on their proper significance relative to the Moon's selenographic coordinate system.

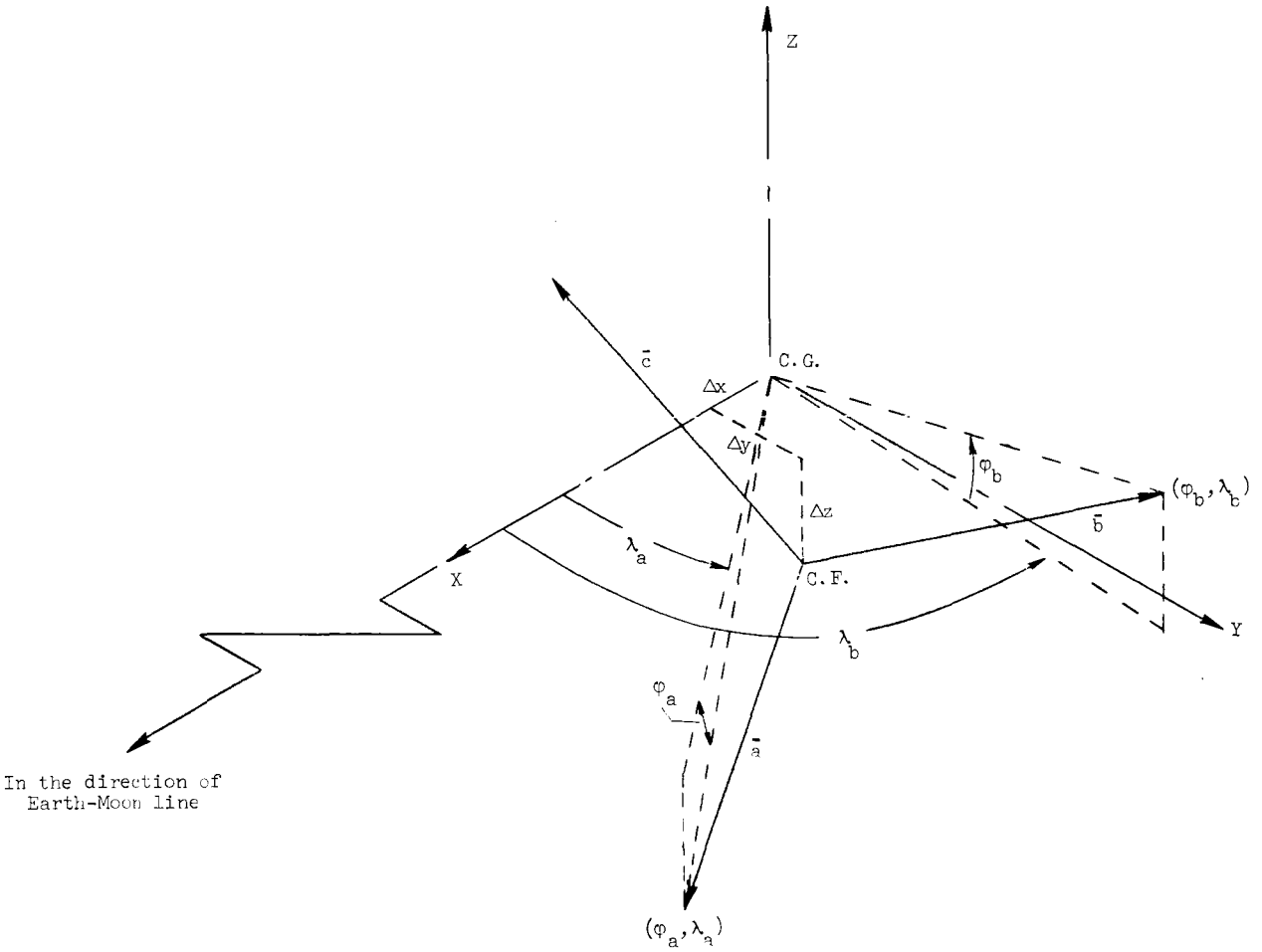

Figure 4.- Orientation of ellipsoidal axes in selenographic coordinate system.

The position and orientation of the ellipsoid relative to the selenographic system as well as the size and shape of the ellipsoid is of interest to many investigators. This is the case of an unrestricted ellipsoid. Hence, case 1 is most important in this study.

Effect of Back-Side Data

Results for the cases listed in table I are given in both tables II and III. The results in table II were obtained by using the combined sources of data, whereas the results in table III were obtained by using data from the Lunar Orbiter imagery only. It is desirable to compare the different treatment of the data. But, because the useful Lunar Orbiter imagery was limited to the Moon's front side, it is exceedingly difficult to obtain an unrestricted solution by using these data only. Hopmann discusses these problems in detail in reference 9 and points out that symmetry in the distribution of the data over the Moon's

TABLE II.- ESTIMATED ORIENTATION AND SIZE OF LUNAR ELLIPSOID USING BOTH LUNAR ORBITER IMAGERY AND APOLLO LASER ALTIMETER DATA

Case	Surface coordinates of ellipsoidal axes										
	Semiaxes, km			Latitude, deg		Longitude, deg		Mean radius, km	Displacement of center of figure, km		
	a	b	c	a	b	a	b		Δx	Δy	Δz
1	1737.6	1735.6	1735.0	-0.063	-0.021	-0.014	89.962	1736.1	-1.320	-0.009	-1.566
2	1738.1	1736.1	1735.5	-.023	-.023	.019	90.024	1736.6	-1.842	.419	-.705
3	1738.1	1736.1	1735.5	-.024	-.024	.007	90.006	1736.6	-1.820	.202	-.742
4	1736.3	1735.2	1734.5	.037	.019	.062	90.072	1735.3	0	0	0
5	1736.2	1735.5	1734.9	-.026	-.026	.020	90.030	1735.5	0	.382	-.800
6	1736.3	1735.1	1734.5	-.119	-.043	-.085	89.935	1735.3	0	-.176	-2.763

TABLE III.- ESTIMATED ORIENTATION AND SIZE OF LUNAR ELLIPSOID USING LUNAR ORBITER IMAGERY

Case	Surface coordinates of ellipsoidal axes										
	Semiaxes, km			Latitude, deg		Longitude, deg		Mean radius, km	Displacement of center of figure, km		
	a	b	c	a	b	a	b		Δx	Δy	Δz
1	1734.8	1734.4	1733.4	0.110	0.140	-0.410	89.640	1734.2	1.488	-1.172	-3.004
2	1738.4	1736.3	1735.5	-.016	-.016	.079	90.043	1736.7	-2.192	1.537	-.496
3	1739.9	1736.8	1736.1	-.024	-.023	.009	90.119	1737.6	-3.619	.241	-.717
4	1736.3	1735.0	1734.4	.021	.054	-.008	89.994	1735.2	0	0	0
5	1736.2	1735.5	1734.7	-.017	-.017	.085	90.031	1735.5	0	1.646	-.510
6	1736.3	1735.1	1734.3	.010	.005	.111	90.096	1735.2	0	1.376	-.078

surface is most important. In figure 1 it is seen that this is not the case with the Lunar Orbiter data. But in reference 10, Gavrilov points out that this problem can be partly circumvented by constraining the displacement to the YZ-plane ($\Delta x = 0$) as is done in cases 4, 5, and 6. The effect of this constraint on Δx is seen for those results in table III. For cases 1, 2, and 3, Δx was not constrained in any way. These cases are not well behaved. The axial magnitudes are seen to change radically when the axial orientations are restricted as in cases 2 and 3. Cases 4, 5, and 6, however, do behave well. Hence, these are the cases for which good results are obtained by using Lunar Orbiter imagery only. When the axial magnitudes for these cases in table III are compared with those for the same cases in table II, striking similarities are noted. In particular, differences in the axial magnitudes for cases 4, 5, and 6 do not exceed ±200 meters. Further, if the value of Δx is added to the value of the a-axis for all cases, the sum is consistently 1736.25 ± 0.05 km. Hence the results in the two tables are consistent and, under the appropriate restrictions, the two different treatments of the data yield similar results.

The dominant effect of the Apollo data is in the control of both the center displacement and the axial orientations (latitudes and longitudes of a and b) of the ellipsoid. In tables II and III the latitude and longitude of an axis refer to the selenographic latitude and longitude of that point where the ellipsoid is pierced by the indicated ellipsoidal axis. (See fig. 4.) Since the direction of the polar axis c is by definition determined from the cross product of $\bar{a}$ and $\bar{b}$, the coordinates for that axis are not shown in either table. The coordinates shown are for the end points of the ellipsoidal axes and are affected by both the orientation and the displacement of the ellipsoid axes. (See fig. 4.) These coordinates together with the axial displacement permit the ellipsoidal orientation to be represented in terms of quantities which can be easily visualized. As can be seen, their magnitudes are small (less than $0^{\circ}.5$). In fact, if case 1 in table III is ignored these coordinates are less than $0^{\circ}.12$. Thus the ellipsoidal axes are very near the Moon's three principal axes of inertia.

The effectiveness of the back-side data in controlling the a-axis is clearly seen when these parameters for the axial orientation are compared qualitatively in both tables II and III. In table II a definite trend in the axial direction appears to be established. Only the latitudes of case 4 are positive. The mean latitudes are $-0^{\circ}.036$ for the a-axis and $-0^{\circ}.20$ for the b-axis. These mean values include case 4. Without case 4, the latitudes are $-0^{\circ}.051$ for the a-axis and $-0^{\circ}.027$ for the b-axis. In table III these same trends are not clearly established.

Since table II was developed by using both back-side and front-side data, these results are more reliable. However, under the appropriate restrictions it is seen that the Lunar Orbiter imagery can yield results which are similar to those in table II. In particular, the axial magnitudes and mean radii compare well. These same trends are seen more clearly

in tables IV and V. Even so, this study is concerned with the best estimate of the Moon's size and shape. Therefore, the remainder of this paper is concerned primarily with the results of tables II and IV since they contain both data sources.

TABLE IV.- ELLIPSOIDAL SHAPE AND DISPLACEMENT CORRESPONDING TO RESULTS IN TABLE II

Case	Axial differences, km		Flattening, km		Displacement magnitude, km
	a - c	b - c	Polar	Equatorial	
1	2.6	0.6	0.0014963	0.0011510	2.048
2	2.6	.6	.0014959	.0011507	2.016
3	2.6	.6	.0014959	.0011507	1.976
4	1.8	.7	.0010367	.0006335	0
5	1.3	.6	.0007488	.0004032	.887
6	1.8	.6	.0010367	.0006911	2.769

TABLE V.- ELLIPSOIDAL SHAPE AND DISPLACEMENT CORRESPONDING TO RESULTS IN TABLE III

Case	Axial differences, km		Flattening, km		Displacement magnitude, km
	a - c	b - c	Polar	Equatorial	
1	1.4	1.0	0.0008070	0.0002306	3.551
2	2.9	.8	.0016682	.0012080	2.723
3	3.8	.7	.0021840	.0017817	3.697
4	1.9	.6	.0010943	.0007487	0
5	1.5	.8	.0008640	.0004032	1.723
6	2.0	.8	.0011519	.0006911	1.378

Effect of Additional Constraints

As was noted previously, the results of the analysis are tabulated in two groups according to the restrictions imposed on the ellipsoid displacement and orientation. (See table I.) Hence, some insight into the behavior of the estimated ellipsoidal fit can be gained by comparing the results of the two groups as additional constraints are imposed on the solution.

Consider the results in table II for the displacement of the center of the ellipsoid. If the axial orientation is ignored momentarily, it is noted that the displacement of the origin along the Z-axis is always negative and is between -700 and -2800 meters. Further, for the first group (cases 1, 2, and 3) the displacement of the origin along the X-axis changes from -1.32 km to about -1.84 km. For both cases 2 and 3, Δx is approximately -1.8 km. This result for Δx ($\Delta x = -1.8$ km) agrees with the results reported by Wollenhaupt and Sjogren (ref. 7) for a case with similar constraints. Although they usually restricted both the Δz component of the displacement to be zero and the magnitude of the c-axis to a preassigned value, they did compute one case in which this Δz displacement was assumed to be -1.0 km. For this case the value of Δx was -1.5 km. Hence, there is a tendency for the absolute value of the Δx displacement to decrease as the magnitude of the Δz displacement increases. This tendency is confirmed here. In particular, for cases 1 and 2 Δx changes from -1.32 km to -1.84 km as Δz changes from -1.57 km to -0.70 km.

The results of this paper do not confirm the Y displacement of $\Delta y = -1.2$ km in reference 7. In fact, for the similar cases (cases 2 and 3) the Δy displacement is seen to be opposite in sign. However, it is also pointed out in reference 7 that those results are inconclusive. In particular, it is concluded in reference 7 that this displacement of the ellipsoidal center is in a direction along the X-axis away from the Earth. In the present analysis it is concluded that the displacement is in a direction along the Earth-Moon line away from the Earth and to the south of (below) the lunar equator and that the tendency is for the center of figure to lie slightly to the right of the Moon's center of disk.

The displacement in the Y-direction is correlated to the longitudinal component of the axial orientation. In table II all the values for Δy are positive except for cases 1 and 6. For these cases the longitude of both a and b are negative (less than 0° or 90°). The longitudes for the remaining cases are positive. But cases 2, 3, 4, and 5 tend to restrict Δy in some way. This restriction is either direct as for case 4 when $\Delta x = \Delta y = \Delta z = 0$ or indirect as when the attitude of the c-axis is restricted. Hence, the tendency is toward negative longitudes when Δy is not restricted.

Consistency of the Results

In table IV axial differences and ellipsoidal flattenings are given for the six cases. Here the consistency of the results is more clearly seen. The axial difference b - c

changes only slightly for case 4. However, the axial difference $a - c$ changes radically (800 meters) from the first group of the second group. Further, for case 5 an additional change of 500 meters is noted. These same trends are noted for the polar and equatorial flattening.

Of these cases, cases 1, 2, and 3 are more consistent and are not restricted in Δx. Even the magnitudes of the ellipsoidal displacements differ only by 70 meters: The maximum displacement is about 2.05 km whereas the minimum displacement is about 1.98 km. These results are most encouraging and indicate that these parameters for the ellipsoidal size and shape and for the ellipsoidal displacement may be near their true values.

Case 1 is of particular interest. This case represents results where both the ellipsoidal center and the axial orientation are not restricted in any fashion. It is the case of a free-floating ellipsoid with the axial magnitudes

$$a = 1737.6 \text{ km} \qquad b = 1735.6 \text{ km} \qquad c = 1735.0 \text{ km}$$

and a displacement of center of about 2.0 km. The components of this displacement are shown in table II to be

$$\Delta x = -1.320 \text{ km} \qquad \Delta y = -0.009 \text{ km} \qquad \Delta z = -1.566 \text{ km}$$

In view of the preceding discussion and that which is to follow, this case is most representative of the results in this paper.

Comparisons With Other Investigations

Some comparisons with the results of reference 7 have been made already in this paper. But comparisons with other investigations (refs. 13, 14, 15, and 16) are possible. Although there is considerable disagreement in the location of the Moon's center of figure and the orientation of the ellipsoidal axis (refs. 9, 10, and 13), there is agreement that the center must be displaced to the south of the lunar equator (ref. 13). In fact, the persistence of the negative sign of Δz in both tables II and III substantiates this claim. Further, the values $-0.705 \text{ km} \geqq \Delta z \geqq -1.566 \text{ km}$ from cases 1 and 2 of table II agree well with those estimates of $-1.0 \geqq \Delta z \geqq -1.5$ km for that component of the displacement in reference 13.

Comparing the axial magnitudes is difficult since the independent estimates of the values of a, b, and c vary widely. The axial differences $a - c = 2.6$ km and $b - c = 0.6$ km reported here do compare favorably with the corresponding values of 1.1 km and 0.7 km, respectively, reported in reference 9. Those values were computed from the ratio of the Moon's three moments of inertia and represent the dynamical shape

of the Moon (ref. 9) whereas the results of this paper are for the geometric shape. Other estimates of the Moon's axial magnitudes range from being nearly spherical to having axial differences for $a - c$ of 6.8 km and better. Hence, further comparisons of axial differences are difficult. However, some comparisons of the lunar mean sphere can be made.

The mean radius of the Moon is defined here as the radius of that sphere with a volume equal to that of the triaxial ellipsoid. This spherical radius can be shown to be given by

$$R = \sqrt[3]{abc}$$

With this relation, the mean radii in both tables II and III were computed. In table II this radius is seen to range from a low of about 1735.3 to about 1736.6 km, where the latter value is for case 2. The value for the free-floating ellipsoid is 1736.1 km. This radius is about 1.9 km smaller than the previously accepted value of 1738.0 km. Here, the smaller radius is due primarily to the smaller axial magnitudes for b and c. (The magnitude of the a-axis is very near this radius of 1738 km for cases 1, 2, and 3.) Consequently, this study indicates that the Moon's mean radius is best represented by a smaller mean sphere. This fact is sustained by Sjogren and Trask (ref. 14), Compton and Wells (ref. 15), and others. Kaula (ref. 16) points out that a smaller ellipsoidal mean radius obtains better agreement between the calculated and the observed Earth-Moon distance. But, Gavrilov (ref. 10) concludes that the presently accepted value for the mean radius, 1738.0 km, is about 0.8 to 1.0 km too high. Thus, the results of this study are supported by these investigations.

CONCLUDING REMARKS

Throughout this study, emphasis has been placed upon obtaining good preliminary results for the Moon's size and shape from a unique source of data – the Lunar Orbiter photographs and the Apollo laser altimeter. Although a need exists for additional data over the Moon's surface, data for both the Moon's front side and back side were available from these two sources. These data were treated in a manner such as to yield that triaxial ellipsoid which would best fit all data. The ellipsoid was a free-floating ellipsoid with the axial magnitudes $a = 1737.6$ km, $b = 1735.6$ km, and $c = 1735.0$ km and a displacement of center of about 2.0 km. The components of this displacement are $\Delta x = -1.320$ km, $\Delta y = -0.009$ km, and $\Delta z = -1.566$ km. Although the axes of this ellipsoid were found to be slightly skewed relative to the Moon's principal axes of inertia, the components of the orientation were small. Hence, the ellipsoidal axes were found to be nearly parallel to

the principal axes of inertia. Both the a-axis and b-axis did pierce the Moon's surface below the lunar equator. However, the a-axis was found to be very near the lunar prime meridian (selenographic longitude = 0°).

The mean radius of this ellipsoid was estimated to be about 1736.1 km. This radius is about 1.9 km smaller than the previously accepted value of 1738.0 km.

Langley Research Center,
National Aeronautics and Space Administration,
Hampton, Va., June 19, 1973.

APPENDIX

SELENOGRAPHIC COORDINATES FOR POINTS ON THE LUNAR SURFACE

The selenographic coordinates for points on the lunar surface are listed on the following pages. These coordinates were computed from the Lunar Orbiter imagery and the sites are identified in figure 1.

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
			LUNAR ORBITER PHOTOGRAPHIC SITE V 30					
1733.9	-43.68	-15.30	1735.5	-43.77	-15.24	1732.4	-43.27	-15.21
1732.3	-43.49	-15.19	1733.7	-43.07	-15.10	1734.1	-42.92	-14.98
1734.5	-42.62	-14.87	1735.5	-41.52	-14.72	1734.1	-42.32	-14.72
1734.5	-42.17	-14.69	1734.7	-41.80	-14.66	1735.9	-41.25	-14.64
1736.3	-41.12	-14.61	1735.8	-41.37	-14.59	1735.8	-41.00	-14.51
1733.2	-40.18	-14.49	1733.2	-39.99	-14.47	1734.8	-39.80	-14.44
1733.8	-40.46	-14.43	1739.6	-44.42	-14.35	1740.7	-44.07	-14.25
1737.6	-43.54	-14.24	1737.7	-39.10	-14.21	1734.5	-42.65	-14.02
1735.0	-42.93	-14.01	1734.3	-42.44	-13.93	1734.5	-42.23	-13.87
1734.3	-41.83	-13.79	1734.5	-41.92	-13.78	1735.9	-41.36	-13.78
1737.1	-40.60	-13.64	1735.7	-41.52	-13.62	1736.2	-40.11	-13.53
1736.8	-40.81	-13.50	1736.7	-40.53	-13.45	1735.6	-39.92	-13.42
1735.0	-39.60	-13.37	1735.7	-39.26	-13.36	1735.8	-39.44	-13.36
1739.6	-44.17	-13.24	1737.1	-43.69	-13.06	1737.3	-43.27	-13.04
1737.5	-43.39	-12.99	1737.4	-43.12	-12.98	1735.5	-42.21	-12.96
1734.8	-41.83	-12.93	1737.4	-42.98	-12.91	1734.8	-41.69	-12.82
1736.9	-41.10	-12.75	1735.7	-41.44	-12.74	1736.3	-41.24	-12.66
1736.6	-40.99	-12.62	1736.1	-39.77	-12.59	1737.7	-40.84	-12.58
1736.4	-40.60	-12.56	1734.8	-40.17	-12.50	1735.4	-40.04	-12.49
1736.1	-40.41	-12.48	1735.3	-40.10	-12.47	1735.8	-43.87	-12.41
1739.1	-44.39	-12.39	1738.3	-44.09	-12.34	1737.0	-39.25	-12.31
1733.3	-43.24	-12.17	1735.0	-43.78	-12.17	1737.2	-39.15	-12.16
1733.9	-43.48	-12.14	1733.1	-43.12	-12.14	1734.1	-42.72	-12.07
1733.1	-43.01	-12.04	1736.4	-42.41	-11.97	1736.7	-42.24	-11.95
1736.3	-41.63	-11.95	1736.6	-41.77	-11.94	1734.1	-42.63	-11.92
1737.3	-41.99	-11.91	1736.4	-41.09	-11.82	1736.9	-41.19	-11.78
1737.1	-41.40	-11.76	1737.1	-40.95	-11.73	1735.8	-40.30	-11.66
1736.2	-40.66	-11.66	1739.9	-39.48	-11.45	1739.2	-39.25	-11.43
1738.2	-44.35	-11.36	1732.7	-43.63	-11.32	1734.2	-43.29	-11.32
1732.9	-43.97	-11.28	1733.8	-43.19	-11.28	1736.7	-44.19	-11.27
1733.4	-42.51	-11.15	1734.6	-42.30	-11.08	1733.2	-42.97	-11.02
1737.4	-41.71	-11.01	1736.3	-42.11	-10.99	1736.5	-41.03	-10.97
1736.5	-41.16	-10.95	1737.5	-41.89	-10.87	1736.9	-40.50	-10.86
1736.2	-40.77	-10.84	1737.5	-40.38	-10.82	1737.2	-39.77	-10.74
1736.0	-39.87	-10.69	1736.9	-40.16	-10.69	1737.1	-39.49	-10.61
1737.3	-39.70	-10.59	1735.9	-39.42	-10.46	1733.2	-43.44	-10.37
1732.8	-44.18	-10.36	1738.0	-44.51	-10.35	1733.0	-43.29	-10.32
1736.7	-44.31	-10.31	1738.7	-44.64	-10.27	1737.7	-41.97	-9.99
1736.9	-40.88	-9.98	1736.8	-41.51	-9.97	1736.9	-41.35	-9.96
1734.4	-40.15	-9.94	1736.5	-40.62	-9.91	1739.5	-44.46	-9.90
1735.8	-40.36	-9.86	1736.3	-39.84	-9.80	1734.1	-40.03	-9.79
1736.0	-39.49	-9.76	1735.7	-39.38	-9.76	1739.8	-44.70	-9.74
1736.5	-39.44	-9.59	1736.8	-41.58	-9.51	1737.3	-41.23	-9.49
1736.5	-41.47	-9.45	1738.4	-42.60	-9.44	1738.0	-42.18	-9.43
1738.0	-42.04	-9.39	1737.3	-41.71	-9.37	1735.2	-40.28	-9.36
1737.2	-40.80	-9.35	1737.2	-40.97	-9.34	1734.9	-39.91	-9.33
1737.4	-39.78	-9.28	1735.2	-40.38	-9.24	1734.3	-40.10	-9.22
1739.3	-44.65	-9.18	1737.1	-43.85	-9.18	1739.0	-44.63	-9.12
1736.5	-39.55	-9.11	1736.1	-39.44	-9.10	1737.9	-43.02	-9.08
1738.7	-43.55	-9.04	1737.6	-42.30	-9.03	1738.6	-44.54	-9.02
1737.2	-44.27	-9.00	1737.5	-41.94	-9.00	1738.2	-43.33	-8.98
1737.3	-44.10	-8.98	1737.2	-44.28	-8.93	1737.6	-43.72	-8.92
1737.5	-43.94	-8.92	1738.3	-43.29	-8.91	1737.1	-41.18	-8.90
1737.5	-41.68	-8.90	1736.8	-41.28	-8.88	1737.5	-42.57	-8.85
1737.4	-40.73	-8.81	1736.5	-41.03	-8.75	1736.8	-41.47	-8.73
1735.5	-40.30	-8.71	1736.0	-39.94	-8.66	1735.3	-40.08	-8.64
1736.7	-39.87	-8.64	1736.4	-39.76	-8.60	1735.9	-39.52	-8.58
1738.0	-43.19	-8.46	1742.0	-44.79	-8.46	1737.0	-42.89	-8.32
1736.2	-41.59	-8.31	1736.5	-42.79	-8.25	1735.0	-42.13	-8.25
1735.3	-42.25	-8.25	1735.9	-40.54	-8.23	1736.1	-42.60	-8.22
1736.2	-43.97	-8.22	1734.5	-40.16	-8.16	1735.5	-40.68	-8.09
1731.2	-40.00	-8.01	1732.0	-39.47	-7.86	1740.4	-44.21	-7.80
1737.1	-42.83	-7.77	1736.5	-42.17	-7.73	1739.1	-43.89	-7.69
1740.0	-44.32	-7.65	1736.7	-40.70	-7.58	1738.9	-41.96	-7.57
1735.3	-43.12	-7.56						
			LUNAR ORBITER PHOTOGRAPHIC SITE V 36					
1735.8	5.79	-19.40	1736.0	5.91	-19.39	1737.1	6.11	-19.36
1737.3	6.24	-19.36	1735.8	5.97	-19.36	1739.7	6.60	-19.33
1739.2	6.77	-19.32	1739.7	6.45	-19.32	1738.9	6.91	-19.30
1739.0	7.04	-19.29	1738.8	7.33	-19.28	1738.7	7.41	-19.27
1738.8	7.26	-19.27	1739.0	6.99	-19.27	1738.9	7.16	-19.26
1738.8	7.50	-19.25	1740.6	7.64	-19.22	1740.8	7.71	-19.21
1741.3	7.89	-19.17	1735.2	5.78	-18.98	1737.5	6.11	-18.95
1735.6	5.68	-18.94	1737.3	6.00	-18.94	1739.2	6.43	-18.93
1739.3	6.82	-18.92	1739.1	6.56	-18.91	1739.2	6.63	-18.90
1739.0	6.99	-18.89	1739.3	6.59	-18.88	1738.6	7.34	-18.87
1739.0	6.85	-18.87	1738.7	7.40	-18.86	1738.5	7.64	-18.84
1738.6	7.19	-18.83	1738.7	7.26	-18.82	1738.9	7.56	-18.79
1740.6	7.87	-18.79	1740.5	7.80	-18.76	1739.4	6.23	-18.65
1737.7	5.95	-18.65	1736.4	5.73	-18.65	1737.6	6.08	-18.64
1739.5	6.44	-18.64	1736.3	5.88	-18.64	1739.2	6.28	-18.63
1739.3	6.32	-18.62	1739.4	6.56	-18.61	1737.6	6.13	-18.61
1739.5	6.63	-18.60	1739.4	6.79	-18.59	1739.3	6.71	-18.58
1739.0	7.08	-18.55	1738.7	7.16	-18.55	1739.0	7.00	-18.54
1740.7	7.73	-18.50	1739.0	7.43	-18.50	1738.8	7.29	-18.50

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1740.4	7.91	-18.50	1739.1	6.57	-18.32	1739.1	6.43	-18.32
1736.4	5.69	-18.32	1737.4	6.09	-18.29	1736.7	5.57	-18.29
1739.4	6.25	-18.28	1736.4	5.85	-18.28	1739.1	6.96	-18.25
1736.1	5.59	-18.25	1739.1	6.68	-18.25	1739.1	6.37	-18.24
1736.2	5.85	-18.23	1738.7	7.45	-18.23	1736.1	5.70	-18.23
1738.9	7.10	-18.21	1737.4	5.99	-18.19	1739.3	6.29	-18.19
1739.2	6.45	-18.18	1739.0	6.72	-18.17	1740.7	7.68	-18.16
1737.1	6.10	-18.16	1740.4	7.78	-18.15	1740.3	7.88	-18.15
1739.3	6.50	-18.12	1739.1	6.69	-18.10	1738.6	7.27	-18.09
1738.9	6.92	-18.09	1738.7	7.44	-18.08	1738.7	7.15	-18.07
1738.9	7.02	-18.07	1738.8	7.58	-18.06	1740.5	7.90	-18.04
1740.4	7.76	-18.02	1737.1	5.92	-17.88	1735.7	5.76	-17.84
1739.2	6.62	-17.82	1739.2	6.33	-17.82	1739.2	6.17	-17.81
1735.5	5.55	-17.80	1739.1	6.74	-17.77	1739.3	6.46	-17.76
1739.0	7.01	-17.74	1738.9	7.12	-17.74	1738.7	7.25	-17.74
1738.7	7.39	-17.71	1740.7	7.90	-17.69	1740.5	7.76	-17.69
1738.7	7.62	-17.67	1739.7	6.09	-17.38	1739.6	5.97	-17.32
1739.5	6.18	-17.30	1739.4	6.35	-17.30	1739.3	6.62	-17.30
1739.3	6.47	-17.29	1736.1	5.66	-17.28	1736.1	5.50	-17.26
1739.0	6.97	-17.26	1739.1	6.76	-17.24	1738.9	7.57	-17.22
1740.7	7.91	-17.21	1739.0	7.13	-17.20	1739.0	7.19	-17.18
1738.3	7.35	-17.17	1736.8	5.37	-16.83	1739.2	7.00	-16.71
1739.3	6.72	-16.71	1738.9	7.32	-16.63	1738.9	7.54	-16.59
1739.3	6.72	-16.71						

LUNAR ORBITER PHOTOGRAPHIC SITE V 35

1735.4	15.82	-17.37	1735.0	16.30	-17.29	1734.7	15.09	-17.20
1735.8	15.56	-17.19	1735.7	15.33	-17.19	1735.4	15.79	-17.15
1735.1	16.26	-17.14	1735.8	12.92	-17.06	1735.7	13.18	-17.03
1735.8	13.05	-17.01	1735.5	13.28	-16.98	1735.3	13.58	-16.95
1735.3	13.55	-16.95	1735.1	13.90	-16.94	1735.2	13.78	-16.92
1735.7	15.23	-16.87	1735.5	15.63	-16.84	1735.4	15.90	-16.83
1735.7	15.67	-16.80	1735.3	15.98	-16.78	1735.1	16.19	-16.75
1736.0	12.71	-16.74	1735.4	13.26	-16.71	1735.7	12.90	-16.70
1735.3	13.35	-16.68	1735.2	13.56	-16.68	1735.5	13.14	-16.67
1735.0	13.87	-16.61	1735.7	13.93	-16.57	1735.9	14.41	-16.54
1736.1	14.56	-16.53	1735.4	14.85	-16.49	1736.1	15.30	-16.48
1736.4	15.16	-16.47	1735.4	13.34	-16.46	1735.7	15.85	-16.44
1735.6	13.15	-16.44	1735.2	13.70	-16.43	1735.2	13.61	-16.41
1735.6	15.65	-16.41	1735.9	14.00	-16.39	1736.1	14.16	-16.37
1735.7	13.05	-16.36	1735.6	13.19	-16.35	1735.6	13.09	-16.33
1735.1	16.23	-16.31	1735.8	14.43	-16.31	1735.6	14.82	-16.31
1735.5	13.35	-16.31	1736.6	13.99	-16.30	1735.4	13.44	-16.29
1735.6	13.01	-16.25	1735.7	15.06	-16.23	1735.9	12.73	-16.22
1736.2	12.63	-16.21	1736.0	15.28	-16.21	1735.0	16.34	-16.20
1735.1	16.22	-16.20	1735.4	13.34	-16.18	1735.5	15.95	-16.18
1735.2	13.63	-16.18	1735.2	13.52	-16.17	1735.4	13.46	-16.16
1736.1	15.52	-16.16	1735.3	16.09	-16.14	1736.3	15.30	-16.14
1735.5	13.88	-16.11	1735.1	16.21	-16.04	1735.3	16.08	-16.03
1735.9	15.53	-16.02	1735.6	14.86	-16.02	1736.0	12.89	-16.00
1736.0	12.65	-15.99	1735.8	15.67	-15.97	1735.2	16.29	-15.97
1735.6	15.81	-15.96	1735.9	15.20	-15.96	1735.6	13.10	-15.95
1735.7	15.12	-15.95	1735.6	13.17	-15.94	1735.5	13.27	-15.94
1735.4	13.49	-15.93	1735.7	15.45	-15.91	1735.5	13.40	-15.91
1735.3	15.92	-15.88	1735.2	13.61	-15.87	1735.7	13.86	-15.87
1736.3	14.20	-15.85	1735.1	13.72	-15.85	1735.9	14.02	-15.85
1736.0	14.08	-15.84	1736.1	13.96	-15.82	1735.6	14.43	-15.80
1735.6	14.69	-15.79	1735.5	14.61	-15.79	1735.8	15.11	-15.79
1735.6	14.56	-15.77	1735.6	14.69	-15.76	1735.4	14.86	-15.74
1736.0	15.28	-15.71	1735.6	15.67	-15.64	1736.1	12.60	-15.61
1735.6	13.21	-15.59	1736.0	13.04	-15.59	1736.0	12.70	-15.57
1736.0	12.80	-15.57	1735.6	13.29	-15.55	1735.8	13.07	-15.53
1735.9	13.05	-15.52	1735.9	13.03	-15.52	1735.4	13.60	-15.47
1735.9	14.20	-15.44	1736.1	13.98	-15.43	1735.6	14.49	-15.42
1735.7	14.56	-15.41	1735.7	14.34	-15.40	1735.5	14.87	-15.40
1735.8	14.46	-15.37	1735.5	14.69	-15.37	1735.7	15.02	-15.32
1735.6	12.97	-15.19	1735.3	13.23	-15.18	1735.4	13.34	-15.18
1735.5	13.06	-15.17	1735.7	13.84	-15.11	1735.2	13.53	-15.09
1735.8	13.66	-15.09	1735.8	13.74	-15.06	1736.0	14.19	-15.04
1736.0	14.43	-15.00	1736.0	15.06	-15.00	1735.8	14.82	-14.99
1735.8	14.65	-14.98	1735.9	14.70	-14.96	1736.5	13.66	-14.75
1736.2	14.32	-14.67	1736.3	13.65	-14.65	1735.9	14.53	-14.64
1736.2	13.89	-14.63	1736.1	14.95	-14.59	1735.7	14.63	-14.57
1735.9	14.44	-14.57	1736.0	14.99	-14.56	1735.7	14.78	-14.56
1735.9	14.44	-14.57						

LUNAR ORBITER PHOTOGRAPHIC SITE V 31

1734.7	47.76	-6.36	1734.9	48.08	-6.26	1734.1	50.39	-6.19
1734.3	49.83	-6.11	1734.1	50.16	-6.05	1735.5	51.53	-6.04
1733.9	52.22	-5.93	1735.0	51.94	-5.92	1734.4	51.11	-5.88
1734.0	48.06	-4.99	1734.7	47.67	-4.98	1733.6	48.29	-4.93
1734.0	48.11	-4.89	1734.6	49.32	-4.83	1734.6	48.56	-4.73
1735.3	49.13	-4.69	1734.6	48.72	-4.66	1734.1	50.34	-4.66
1734.1	49.91	-4.56	1734.6	51.28	-4.36	1734.1	52.19	-4.20
1733.6	52.63	-4.08	1735.4	47.76	-4.03	1732.8	52.44	-4.03
1733.4	53.07	-4.00	1733.6	52.80	-3.99	1735.0	48.42	-3.89
1735.2	48.24	-3.75	1734.5	49.15	-3.72	1734.8	48.85	-3.65
1734.6	49.56	-3.65	1734.6	49.07	-3.55	1734.4	49.88	-3.47

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1734.2	50.02	-3.43	1733.7	50.18	-3.42	1734.2	50.29	-3.38
1733.8	50.59	-3.36	1734.0	50.38	-3.34	1735.2	47.52	-3.29
1734.8	47.88	-3.26	1734.6	47.67	-3.23	1734.7	47.99	-3.23
1732.9	52.42	-3.22	1734.8	48.39	-3.09	1734.4	52.08	-3.02
1733.1	52.34	-3.00	1735.9	47.59	-2.97	1734.5	49.38	-2.90
1736.1	47.96	-2.89	1731.6	52.95	-2.88	1734.1	49.20	-2.82
1735.7	48.09	-2.81	1735.6	47.73	-2.80	1734.5	49.48	-2.70
1733.9	49.93	-2.66	1736.7	48.64	-2.62	1733.9	50.47	-2.50
1734.1	50.83	-2.49	1733.6	51.21	-2.43	1734.0	51.40	-2.30
1733.1	51.96	-2.29	1734.3	49.67	-2.26	1734.3	50.28	-2.26
1734.1	50.05	-2.18	1734.0	51.40	-2.13	1734.2	50.73	-2.10
1734.5	50.12	-2.06	1734.2	51.12	-2.02	1737.1	48.26	-1.98
1735.8	47.92	-1.95	1734.0	51.46	-1.88	1731.3	52.98	-1.82
1735.4	48.93	-1.73	1735.0	49.50	-1.49	1734.6	50.04	-1.47
1734.8	50.53	-1.33	1734.7	50.92	-1.22	1734.8	51.17	-.92
1734.7	51.89	-.80	1735.6	48.46	-.77	1736.4	48.02	-.67
1732.9	52.74	-.66	1735.5	48.78	-.51	1736.8	49.28	-.42
1735.0	49.92	-.30	1735.0	50.05	-.16	1734.8	50.57	-.12
1734.4	50.39	-.05	1735.1	50.88	.00	1734.6	51.10	.17
1730.5	52.26	.77	1731.7	52.77	.92	1734.5	47.69	1.08
1735.6	48.86	1.31	1736.2	50.66	2.05			
			LUNAR ORBITER PHOTOGRAPHIC SITE V 26.1					
1734.1	25.17	1.28	1734.7	27.76	3.02	1736.2	26.83	3.21
1736.0	26.74	3.21	1734.9	27.09	3.22	1734.9	27.34	3.22
1736.3	26.61	3.24	1735.7	26.98	3.25	1734.6	27.62	3.28
1734.7	27.42	3.28	1734.3	27.98	3.31	1734.2	28.10	3.37
1735.5	26.99	3.48	1735.6	26.74	3.52	1735.7	26.60	3.54
1736.8	26.87	3.54	1735.1	27.33	3.55	1734.9	27.26	3.59
1734.4	28.00	3.59	1734.8	27.44	3.59	1734.2	27.78	3.66
1735.7	26.66	3.81	1735.8	27.28	3.91	1735.4	26.98	3.93
1735.6	27.53	3.94	1734.5	27.88	3.96	1734.6	28.06	3.98
1735.1	27.69	4.00	1740.3	26.54	4.46	1735.2	27.20	4.53
1735.2	27.05	4.54	1735.4	27.29	4.54	1734.7	27.73	4.57
1734.2	27.91	4.62	1735.4	27.65	4.66	1736.1	26.85	5.13
1735.9	27.03	5.17	1736.0	26.91	5.17	1735.0	27.55	5.18
1735.9	27.22	5.20	1734.7	27.76	5.23			
			LUNAR ORBITER PHOTOGRAPHIC SITE V 21					
1733.5	37.78	10.72	1734.9	38.36	10.76	1734.1	38.22	10.79
1733.2	38.76	10.83	1734.1	37.54	10.84	1735.3	40.82	10.87
1734.9	40.27	10.94	1737.1	39.56	10.98	1733.6	37.33	11.67
1734.0	37.69	11.74	1734.7	37.85	11.74	1736.8	39.01	11.85
1734.9	40.17	11.86	1736.6	39.88	11.88	1737.2	39.16	11.90
1734.3	38.46	11.90	1735.9	40.79	11.93	1738.0	39.37	11.93
1733.1	37.73	12.64	1733.9	38.13	12.65	1734.9	38.69	12.82
1734.5	39.68	12.91	1734.2	40.07	13.05	1733.2	37.25	13.33
1733.5	37.60	13.37	1734.2	38.34	13.50	1733.2	37.45	13.52
1733.1	37.56	13.54	1734.3	38.21	13.54	1734.4	38.68	13.56
1733.2	37.36	13.60	1734.0	39.39	13.60	1733.4	37.67	13.62
1734.4	40.06	13.65	1733.6	37.97	13.67	1734.0	38.59	13.68
1734.3	39.95	13.71	1734.1	39.67	13.71	1734.3	40.25	13.77
1734.2	38.74	13.82	1733.7	39.27	13.82	1735.0	40.52	13.87
1734.0	39.89	13.93	1733.9	40.28	13.98	1734.0	40.06	14.02
1734.3	39.70	14.04	1733.5	37.21	14.04	1733.5	37.45	14.06
1733.2	37.60	14.09	1734.1	40.57	14.10	1733.4	37.76	14.11
1733.2	37.97	14.14	1733.1	37.88	14.15	1733.9	38.34	14.21
1734.5	38.54	14.25	1735.3	38.93	14.29	1734.1	39.37	14.41
1734.1	39.59	14.44	1734.7	39.77	14.50	1734.8	40.09	14.58
1732.5	40.48	14.58	1734.2	37.45	14.91	1733.5	37.09	14.92
1734.0	37.41	15.06	1733.9	37.99	15.07	1735.1	37.61	15.08
1733.9	37.53	15.10	1734.0	37.77	15.10	1734.0	38.11	15.15
1733.8	37.73	15.16	1734.3	38.76	15.27	1734.7	39.75	15.50
1734.7	39.99	15.54	1734.7	39.61	15.54	1735.6	40.50	15.66
1733.7	37.07	15.88	1734.2	37.84	16.02	1734.2	37.74	16.08
1734.5	38.77	16.19	1734.3	38.32	16.25	1734.6	38.53	16.28
1735.1	39.22	16.36	1734.6	39.06	16.36	1735.5	40.23	16.58
1735.8	40.49	16.63	1735.7	40.32	16.66			
			LUNAR ORBITER PHOTOGRAPHIC SITE V 24					
1736.0	-5.28	2.65	1736.8	-5.19	2.68	1737.0	-5.03	2.70
1737.1	-4.83	2.70	1736.9	-4.64	2.76	1737.0	-4.28	2.78
1736.6	-4.01	2.82	1736.6	-3.63	2.84	1735.0	-5.75	2.96
1735.2	-5.58	2.98	1735.2	-5.49	3.00	1735.9	-5.20	3.04
1736.0	-4.94	3.06	1735.9	-4.77	3.07	1736.0	-5.03	3.08
1736.2	-4.48	3.11	1736.1	-4.28	3.13	1736.1	-3.89	3.14
1736.3	-3.48	3.19	1735.2	-5.68	3.34	1735.5	-5.37	3.39
1736.0	-5.11	3.42	1735.9	-5.01	3.43	1736.2	-4.86	3.45
1736.1	-4.60	3.45	1736.1	-4.25	3.47	1736.2	-4.17	3.48
1736.3	-4.56	3.48	1736.1	-3.97	3.51	1736.2	-3.75	3.55
1734.9	-5.80	3.67	1735.1	-5.69	3.70	1735.3	-5.50	3.70
1735.1	-5.75	3.71	1734.7	-5.60	3.72	1735.9	-5.28	3.74
1736.0	-4.95	3.75	1736.3	-5.12	3.76	1735.7	-5.42	3.77
1736.1	-4.74	3.77	1736.0	-4.56	3.78	1735.9	-4.85	3.79
1736.1	-4.43	3.79	1736.3	-4.26	3.83	1736.3	-3.93	3.83
1736.2	-4.13	3.83	1736.4	-3.77	3.87	1736.8	-3.52	3.88
1735.5	-5.32	3.96	1736.3	-4.96	3.97	1734.9	-5.66	3.98

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.1	-4.54	3.98	1735.4	-5.55	3.98	1736.6	-4.24	4.00
1736.3	-5.07	4.01	1736.1	-5.23	4.01	1736.4	-4.42	4.02
1736.2	-4.77	4.04	1736.3	-4.05	4.04	1736.2	-4.56	4.05
1736.4	-4.95	4.05	1736.4	-4.11	4.07	1735.4	-5.47	4.07
1737.2	-3.77	4.07	1737.2	-3.56	4.08	1735.3	-5.61	4.10
1736.4	-3.99	4.10	1735.2	-5.70	4.10	1736.1	-4.20	4.13
1736.2	-4.74	4.14	1736.5	-4.37	4.14	1737.4	-3.61	4.15
1737.0	-3.81	4.16	1736.4	-4.52	4.17	1736.3	-4.14	4.18
1737.0	-3.75	4.19	1736.2	-3.96	4.21	1737.0	-3.80	4.21
1737.0	-3.64	4.21	1734.4	-5.84	4.24	1734.7	-5.69	4.26
1734.5	-5.59	4.27	1736.4	-5.18	4.30	1735.3	-5.35	4.30
1736.3	-4.82	4.32	1736.4	-5.13	4.32	1736.4	-4.69	4.35
1736.4	-4.54	4.35	1736.4	-4.44	4.38	1736.3	-3.98	4.39
1737.5	-3.59	4.42	1736.4	-3.85	4.44	1737.3	-3.75	4.45
1735.4	-5.85	4.56	1735.0	-5.66	4.58	1735.2	-5.59	4.59
1735.7	-5.39	4.60	1736.5	-4.94	4.61	1736.6	-5.14	4.63
1736.6	-5.02	4.64	1736.5	-4.65	4.65	1736.5	-4.51	4.66
1736.5	-4.79	4.67	1736.5	-4.39	4.68	1736.5	-4.11	4.71
1736.5	-3.89	4.73	1737.0	-3.67	4.76	1734.7	-5.80	4.90
1736.8	-5.28	4.91	1734.8	-5.65	4.92	1736.0	-5.48	4.92
1736.7	-5.10	4.94	1736.6	-4.74	4.96	1736.9	-4.91	4.96
1736.7	-5.04	4.96	1736.5	-4.36	5.01	1736.5	-4.23	5.02
1736.4	-4.11	5.03	1736.4	-3.97	5.04	1737.1	-3.74	5.06
1735.3	-5.71	5.20	1735.1	-5.61	5.21	1736.0	-5.53	5.23
1736.2	-5.45	5.24	1735.2	-5.84	5.25	1736.8	-5.21	5.27
1736.7	-5.32	5.27	1736.7	-5.02	5.29	1735.8	-4.96	5.30
1736.7	-4.71	5.31	1735.9	-4.47	5.34	1736.6	-4.39	5.35
1737.6	-3.91	5.37	1736.9	-4.08	5.37			

LUNAR ORBITER PHOTOGRAPHIC SITE V 28

1734.4	-15.10	-5.56	1734.3	-14.94	-5.55	1735.0	-13.74	-5.46
1734.3	-14.59	-5.45	1734.5	-14.66	-5.45	1735.0	-14.26	-5.43
1734.9	-14.02	-5.41	1735.3	-13.31	-5.38	1735.1	-13.47	-5.37
1735.6	-13.03	-5.37	1735.6	-12.78	-5.36	1735.2	-13.38	-5.36
1735.9	-15.13	-5.04	1734.8	-14.84	-5.04	1735.1	-14.91	-5.02
1735.6	-14.23	-5.00	1735.3	-14.63	-4.98	1736.0	-13.68	-4.97
1735.9	-13.32	-4.96	1736.6	-13.04	-4.96	1736.3	-13.91	-4.95
1736.5	-13.13	-4.94	1736.2	-13.52	-4.93	1736.6	-12.80	-4.86
1736.1	-15.17	-4.58	1736.2	-14.60	-4.57	1736.4	-14.97	-4.55
1736.7	-14.46	-4.54	1737.0	-13.97	-4.53	1736.2	-14.67	-4.53
1736.5	-14.21	-4.50	1736.5	-14.15	-4.47	1736.0	-13.70	-4.43
1735.5	-13.42	-4.43	1736.4	-12.75	-4.41	1735.6	-12.97	-4.41
1735.9	-13.20	-4.40	1736.6	-15.14	-4.18	1736.9	-14.95	-4.13
1735.1	-13.94	-4.13	1736.0	-14.73	-4.13	1736.4	-14.51	-4.12
1736.2	-15.28	-4.10	1735.5	-12.96	-4.08	1735.2	-13.61	-4.07
1735.0	-14.13	-4.07	1737.3	-15.08	-4.04	1735.2	-13.87	-4.03
1735.2	-13.16	-4.02	1735.3	-12.84	-4.01	1735.2	-13.78	-3.99
1735.1	-13.30	-3.99	1736.9	-15.13	-3.99	1735.3	-14.12	-3.98
1736.1	-14.88	-3.98	1735.3	-13.72	-3.97	1735.3	-13.41	-3.94
1735.3	-12.67	-3.94	1735.2	-13.06	-3.94	1735.4	-13.92	-3.93
1735.3	-13.25	-3.91	1735.7	-12.96	-3.88	1735.5	-13.01	-3.88
1737.0	-15.15	-3.63	1737.4	-15.39	-3.62	1735.9	-14.76	-3.56
1735.5	-13.55	-3.53	1735.5	-14.29	-3.51	1735.5	-13.75	-3.51
1735.4	-14.15	-3.50	1735.4	-14.44	-3.50	1735.5	-13.93	-3.50
1735.4	-13.02	-3.49	1735.5	-13.31	-3.49	1735.6	-12.86	-3.45
1735.9	-15.28	-3.02	1735.2	-14.97	-2.99	1735.8	-14.81	-2.99
1735.4	-15.07	-2.98	1736.0	-14.09	-2.97	1735.9	-14.41	-2.96
1736.1	-13.92	-2.95	1735.6	-15.54	-2.94	1736.2	-13.67	-2.90
1735.8	-14.20	-2.90	1735.9	-13.31	-2.90	1736.3	-13.52	-2.89
1736.0	-12.98	-2.84	1736.1	-12.71	-2.82	1737.0	-15.50	-2.41
1736.0	-15.25	-2.39	1735.9	-14.32	-2.36	1736.0	-14.10	-2.35
1735.8	-15.03	-2.35	1736.0	-14.55	-2.33	1735.9	-14.93	-2.33
1735.9	-13.74	-2.31	1735.9	-13.63	-2.30	1735.9	-13.43	-2.27
1735.9	-12.88	-2.26	1736.1	-13.89	-2.25	1735.9	-13.05	-2.25
1735.9	-12.88	-2.26						

LUNAR ORBITER PHOTOGRAPHIC SITE V 29

1736.2	12.07	-5.32	1737.1	11.85	-5.32	1736.1	12.30	-5.30
1736.5	12.56	-5.30	1736.6	12.42	-5.29	1736.4	12.64	-5.24
1736.4	12.94	-5.24	1736.4	12.83	-5.23	1736.3	13.02	-5.22
1736.4	13.41	-5.20	1736.4	13.20	-5.18	1736.6	13.56	-5.17
1736.7	13.30	-5.17	1736.8	11.76	-5.02	1737.2	11.96	-5.02
1736.3	12.09	-4.99	1735.5	12.26	-4.96	1736.5	12.42	-4.96
1736.7	12.73	-4.94	1736.6	12.60	-4.94	1736.5	12.84	-4.91
1736.5	13.13	-4.91	1736.8	13.66	-4.90	1736.7	13.30	-4.88
1736.4	13.08	-4.88	1736.4	13.75	-4.85	1737.3	11.71	-4.61
1736.4	12.04	-4.60	1736.4	11.97	-4.59	1736.7	12.40	-4.53
1736.8	12.32	-4.52	1736.9	12.73	-4.52	1736.7	13.01	-4.50
1736.8	12.87	-4.48	1736.6	13.18	-4.48	1736.7	13.28	-4.46
1737.1	13.38	-4.45	1737.1	13.52	-4.44	1737.1	13.94	-4.43
1736.7	13.75	-4.42	1737.4	11.81	-4.27	1736.5	11.98	-4.27
1737.9	11.59	-4.27	1737.1	12.32	-4.26	1737.2	12.46	-4.20
1737.1	12.17	-4.20	1737.2	12.61	-4.18	1737.5	13.02	-4.16
1737.3	12.76	-4.14	1737.0	13.20	-4.09	1738.0	11.63	-4.08
1737.2	13.77	-4.08	1737.3	13.97	-4.07	1737.2	13.55	-4.07
1737.4	13.40	-4.07	1737.4	11.75	-4.05	1737.3	13.67	-4.05
1737.5	11.55	-4.02	1736.6	12.02	-4.01	1736.9	11.84	-4.01
1737.3	12.41	-3.99	1737.3	12.15	-3.99	1737.0	12.49	-3.96

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1737.2	12.61	-3.92	1737.4	12.77	-3.91	1737.1	12.89	-3.87
1737.4	13.08	-3.86	1737.0	13.33	-3.84	1736.9	13.74	-3.84
1737.1	13.85	-3.82	1737.2	13.97	-3.82	1737.9	11.77	-3.82
1736.9	13.41	-3.82	1736.5	13.54	-3.79	1737.7	12.22	-3.76
1736.7	11.99	-3.75	1737.0	11.90	-3.75	1737.4	12.34	-3.72
1737.4	12.59	-3.71	1737.5	12.74	-3.69	1737.5	12.83	-3.68
1737.2	13.22	-3.63	1737.2	13.02	-3.63	1737.1	13.63	-3.62
1737.1	13.39	-3.60	1737.1	13.87	-3.55	1738.0	11.62	-3.47
1736.9	11.78	-3.43	1736.9	11.88	-3.39	1737.7	12.49	-3.37
1737.5	12.27	-3.36	1737.4	12.22	-3.35	1737.4	12.11	-3.34
1737.2	12.36	-3.33	1737.6	12.83	-3.33	1737.6	12.58	-3.33
1737.7	12.53	-3.32	1737.5	12.70	-3.30	1737.4	13.01	-3.30
1737.5	13.13	-3.29	1737.3	13.29	-3.24	1737.4	13.40	-3.22
1736.8	13.73	-3.18	1737.4	13.96	-3.17	1738.3	11.37	-2.99
1738.2	11.54	-2.96	1737.8	12.05	-2.91	1737.1	11.84	-2.88
1737.7	12.48	-2.82	1737.9	12.76	-2.80	1737.5	13.04	-2.75
1737.4	13.10	-2.75	1737.5	13.58	-2.70	1737.3	13.70	-2.66
1736.7	13.97	-2.62	1738.0	11.30	-2.59	1737.9	11.60	-2.54
1736.9	11.73	-2.51	1737.7	12.03	-2.47	1737.9	12.22	-2.46
1737.0	11.65	-2.45	1736.7	11.77	-2.42	1737.7	12.47	-2.41
1737.7	12.56	-2.40	1736.7	11.87	-2.39	1737.6	12.70	-2.35
1737.6	13.47	-2.31	1737.6	13.02	-2.28	1737.5	13.62	-2.22
1737.9	13.96	-2.18						

LUNAR ORBITER PHOTOGRAPHIC SITE V 1

1736.6	-26.27	58.92	1736.6	-26.47	58.94	1736.2	-26.15	58.94
1736.1	-25.84	58.95	1736.2	-25.72	58.97	1736.0	-25.35	58.99
1735.7	-24.79	59.04	1736.1	-24.98	59.10	1736.1	-24.73	59.10
1736.1	-24.32	59.15	1736.2	-24.12	59.19	1737.6	-23.69	59.21
1737.4	-27.00	59.55	1736.4	-26.38	59.56	1736.5	-25.93	59.58
1737.1	-26.69	59.58	1736.2	-26.59	59.60	1736.2	-26.22	59.60
1736.3	-26.06	59.61	1736.1	-25.39	59.66	1736.1	-25.21	59.67
1736.1	-25.59	59.67	1736.2	-25.72	59.68	1736.3	-24.92	59.72
1736.5	-24.25	59.75	1736.0	-24.69	59.75	1736.4	-24.38	59.76
1736.1	-23.69	59.86	1736.0	-24.05	59.86	1736.5	-27.03	60.01
1735.9	-26.05	60.07	1736.0	-26.53	60.08	1735.9	-25.59	60.09
1736.3	-25.78	60.10	1736.3	-24.93	60.18	1736.6	-25.12	60.21
1736.4	-24.58	60.22	1737.1	-24.79	60.27	1736.0	-23.89	60.28
1736.6	-24.24	60.29	1736.1	-24.13	60.30	1735.9	-23.62	60.31
1736.1	-27.09	60.32	1735.9	-26.74	60.35	1736.1	-26.25	60.36
1736.1	-26.57	60.38	1736.2	-25.77	60.49	1737.4	-27.01	60.52
1737.6	-25.15	60.56	1737.1	-26.79	60.56	1736.2	-24.54	60.57
1736.5	-25.65	60.59	1736.1	-26.15	60.60	1736.0	-26.25	60.61
1736.2	-24.88	60.61	1736.1	-24.02	60.62	1736.2	-25.93	60.62
1736.2	-24.31	60.63	1735.7	-23.72	60.65	1736.6	-26.76	60.65
1735.5	-23.56	60.65	1736.9	-27.10	60.66	1735.8	-24.18	60.66
1737.3	-26.39	60.68	1736.3	-24.79	60.68	1736.1	-26.68	60.71
1737.7	-25.17	60.76	1736.1	-26.01	60.77	1735.1	-23.66	60.77
1736.4	-25.88	60.77	1736.6	-24.59	60.78	1737.2	-25.66	60.79
1735.7	-23.97	60.79	1736.2	-24.88	60.82	1737.1	-25.43	60.84
1736.5	-24.71	60.94	1736.8	-24.53	60.94	1737.1	-27.10	60.99
1736.4	-24.22	61.00	1736.6	-23.83	61.02	1736.1	-26.37	61.08
1735.9	-26.57	61.08	1736.1	-25.98	61.09	1736.2	-26.20	61.10
1735.9	-26.79	61.10	1736.5	-25.62	61.19	1737.9	-25.37	61.23
1736.5	-24.34	61.23	1736.4	-24.57	61.23	1736.8	-25.07	61.25
1736.1	-24.18	61.29	1735.7	-23.76	61.30	1735.4	-23.56	61.41
1736.1	-26.30	61.60	1735.6	-26.08	61.62	1734.9	-26.99	61.63
1736.2	-26.08	61.65	1736.1	-25.69	61.69	1736.3	-25.08	61.74
1736.0	-25.26	61.74	1736.3	-25.51	61.75	1735.9	-24.71	61.75
1736.1	-24.47	61.80	1735.5	-24.04	61.83	1735.6	-23.75	61.91
1737.9	-27.10	62.30	1736.1	-26.23	62.31	1736.1	-25.97	62.31
1736.0	-25.66	62.33	1736.3	-26.60	62.35	1737.5	-26.94	62.37
1736.0	-24.85	62.42	1736.3	-25.60	62.43	1736.1	-25.36	62.44
1736.3	-24.45	62.44	1736.1	-24.77	62.47	1736.1	-24.61	62.48
1737.0	-23.99	62.49	1736.7	-24.27	62.49	1736.0	-25.08	62.49
1736.8	-23.80	62.51						

LUNAR ORBITER PHOTOGRAPHIC SITE II P 11AB

1735.5	-.72	-20.57	1735.4	-.55	-20.56	1735.7	-.89	-20.50
1735.9	-.73	-20.50	1736.6	.41	-20.46	1735.8	-.74	-20.44
1736.4	-.24	-20.42	1736.5	-.03	-20.41	1736.4	-.47	-20.40
1735.7	-.57	-20.39	1735.9	-.73	-20.39	1736.7	.40	-20.39
1735.9	.24	-20.37	1736.6	.14	-20.36	1736.3	-.48	-20.35
1735.6	-.92	-20.34	1736.2	-.27	-20.34	1736.0	-.76	-20.32
1736.9	.78	-20.32	1738.5	.56	-20.31	1736.4	-.49	-20.30
1735.9	-.59	-20.28	1736.1	-.50	-20.27	1736.7	.19	-20.25
1736.1	-.78	-20.23	1736.5	.55	-20.22	1736.4	.09	-20.20
1736.5	.36	-20.19	1736.2	-.28	-20.19	1736.9	.73	-20.19
1736.3	.20	-20.19	1735.7	-.97	-20.18	1736.3	-.08	-20.16
1735.8	-.62	-20.16	1736.1	-.31	-20.12	1736.3	.18	-20.11
1735.4	-1.02	-20.10	1737.1	.73	-20.10	1736.6	.50	-20.10
1736.2	-.11	-20.08	1736.4	.34	-20.08	1735.9	-.32	-20.07
1736.2	.06	-20.05	1735.6	-.64	-20.04	1735.5	-1.01	-20.03
1736.3	.15	-20.03	1736.4	.49	-20.01	1735.6	-1.03	-19.98
1735.6	-.85	-19.97	1736.2	.03	-19.97	1736.3	.16	-19.96
1735.8	.14	-19.93	1736.4	.31	-19.93	1736.3	-.15	-19.90
1736.1	-.35	-19.90	1735.7	-.67	-19.88	1736.3	.69	-19.88
1736.0	-.60	-19.86	1736.5	.45	-19.86	1736.1	-.36	-19.84

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.4	.29	-19.83	1735.8	-.88	-19.83	1736.2	.01	-19.83
1736.4	.69	-19.81	1736.3	.10	-19.81	1735.8	-1.05	-19.81
1736.1	-.18	-19.76	1735.8	-.89	-19.74	1735.9	-.63	-19.73
1735.7	-1.09	-19.73	1736.3	.45	-19.73	1736.4	.27	-19.72
1735.9	-.70	-19.70	1736.3	-.01	-19.68	1736.1	.08	-19.67
1736.1	-.41	-19.67	1736.5	.65	-19.66	1736.5	.42	-19.65
1735.7	-.04	-19.64	1735.9	-.73	-19.62	1736.2	.07	-19.60
1736.1	-.66	-19.59	1736.2	.24	-19.59	1735.9	-.92	-19.58
1736.5	.64	-19.58	1736.1	-.23	-19.55	1736.3	.40	-19.55
1736.1	-.44	-19.53	1736.3	-.05	-19.51	1736.2	.04	-19.49
1736.0	-.68	-19.48	1736.0	-1.13	-19.47	1736.0	-.77	-19.47
1736.2	-.45	-19.46	1736.1	-.92	-19.46	1736.0	-.25	-19.45
1736.4	.60	-19.43	1736.1	-.68	-19.43	1736.2	.19	-19.43
1736.1	.03	-19.39	1736.2	.36	-19.38	1736.3	-.48	-19.37
1736.2	-.95	-19.35	1734.4	-.72	-19.35	1736.1	-.07	-19.35
1736.1	-.23	-19.34	1736.2	.17	-19.34	1736.2	-.77	-19.34
1736.1	.33	-19.33	1736.1	-1.18	-19.31	1736.2	-.49	-19.29
1736.2	.58	-19.28	1736.2	-.97	-19.27	1736.1	-.26	-19.27
1736.1	.02	-19.25	1736.1	.13	-19.22	1736.2	-.50	-19.20
1736.5	-.83	-19.19	1736.1	-.11	-19.18	1736.3	-1.00	-19.17
1736.2	-.77	-19.16	1736.0	-.02	-19.15	1736.6	-1.19	-19.14
1735.5	.12	-19.14	1736.1	-.32	-19.11	1736.5	-.84	-19.08
1736.4	-.54	-19.07	1736.2	.26	-19.06	1736.4	-.55	-19.05
1736.3	-.14	-19.05	1736.2	-.02	-19.03	1736.1	.11	-19.03
1736.4	-1.03	-19.02	1736.3	.51	-19.01	1736.7	-.85	-19.00
1735.9	-.34	-18.98	1736.5	.88	-18.98	1736.4	-1.23	-18.98
1736.1	.25	-18.98	1737.6	-.05	-18.95	1736.0	.50	-18.94
1736.6	-.58	-18.91	1736.0	-1.07	-18.91	1736.1	-.80	-18.91
1736.2	.23	-18.88	1736.7	.91	-18.88	1736.2	-.89	-18.88
1738.1	.04	-18.88	1735.9	-.34	-18.86	1737.1	-1.25	-18.86
1735.0	-.59	-18.84	1736.2	-.89	-18.78	1735.9	.03	-18.78
1736.3	-.61	-18.74	1736.6	.20	-18.71	1735.0	.48	-18.70
1736.9	-.11	-18.70	1735.7	.02	-18.68	1736.2	-1.11	-18.68
1736.4	-.93	-18.67	1736.2	-.22	-18.65	1736.0	.45	-18.65
1736.1	.16	-18.60						

LUNAR ORBITER PHOTOGRAPHIC SITE II P 13AB

1735.4	1.01	-42.62	1735.8	1.08	-42.61	1735.3	1.34	-42.59
1735.6	1.66	-42.59	1736.0	1.50	-42.59	1735.9	1.12	-42.58
1735.9	1.90	-42.57	1735.2	1.02	-42.55	1735.3	.93	-42.54
1735.5	1.78	-42.53	1735.9	1.88	-42.51	1735.6	1.63	-42.51
1736.0	2.05	-42.51	1735.3	1.22	-42.50	1735.8	1.10	-42.50
1735.6	1.33	-42.49	1735.8	1.48	-42.48	1736.1	1.95	-42.47
1735.5	1.02	-42.47	1735.8	1.85	-42.47	1735.5	.90	-42.46
1735.7	1.46	-42.45	1736.1	1.97	-42.44	1735.5	.99	-42.43
1735.6	1.20	-42.43	1735.9	2.19	-42.42	1735.8	1.61	-42.42
1735.7	1.10	-42.41	1735.6	2.35	-42.41	1735.9	1.76	-42.41
1735.5	1.31	-42.41	1735.5	2.52	-42.39	1735.8	1.60	-42.37
1735.9	1.98	-42.37	1735.8	1.74	-42.36	1735.7	1.91	-42.36
1735.6	.95	-42.36	1735.5	.89	-42.36	1735.6	1.30	-42.36
1735.7	1.44	-42.35	1735.8	2.18	-42.35	1735.5	1.19	-42.34
1735.8	1.84	-42.34	1735.7	1.03	-42.34	1735.9	1.93	-42.29
1735.8	2.29	-42.29	1735.9	1.92	-42.27	1735.9	1.87	-42.27
1735.7	1.89	-42.26	1736.1	1.89	-42.26	1735.7	1.58	-42.25
1735.6	.87	-42.24	1735.8	1.95	-42.24	1735.8	1.86	-42.24
1735.9	1.87	-42.24	1735.3	.85	-42.23	1735.6	1.16	-42.23
1735.7	1.42	-42.22	1735.8	1.85	-42.22	1735.9	2.13	-42.21
1735.6	.94	-42.21	1735.8	1.83	-42.20	1735.5	1.27	-42.20
1735.5	2.45	-42.20	1735.8	1.73	-42.19	1735.8	1.56	-42.18
1735.5	1.97	-42.17	1735.9	1.87	-42.17	1735.7	1.99	-42.17
1735.5	.91	-42.15	1735.8	1.98	-42.15	1735.7	1.39	-42.15
1735.9	1.88	-42.15	1734.9	1.96	-42.15	1735.8	1.96	-42.14
1735.8	1.92	-42.14	1735.8	1.79	-42.14	1735.8	1.96	-42.14
1735.9	2.28	-42.13	1735.7	1.24	-42.13	1736.4	1.87	-42.13
1736.2	1.84	-42.13	1735.8	1.99	-42.11	1735.8	1.69	-42.11
1735.6	.92	-42.10	1735.8	2.14	-42.10	1735.6	.80	-42.09
1735.6	1.13	-42.09	1735.8	1.92	-42.09	1735.7	1.80	-42.09
1735.6	1.03	-42.08	1735.8	1.99	-42.08	1736.4	1.86	-42.08
1735.8	1.94	-42.08	1735.7	1.55	-42.07	1735.9	2.28	-42.06
1735.6	.86	-42.06	1735.8	1.97	-42.06	1735.7	1.37	-42.05
1735.8	1.67	-42.03	1735.6	.97	-42.03	1735.8	1.78	-42.03
1735.6	.90	-42.03	1735.6	1.21	-42.02	1735.9	2.45	-42.01
1736.2	2.10	-42.01	1735.8	1.90	-42.00	1735.7	.93	-42.00
1735.6	.83	-41.99	1736.0	1.80	-41.99	1735.6	1.11	-41.98
1735.6	.96	-41.97	1735.6	.99	-41.96	1735.9	2.24	-41.96
1735.8	1.88	-41.96	1737.3	.79	-41.96	1735.7	1.52	-41.95
1735.7	1.21	-41.95	1735.8	2.09	-41.95	1735.8	1.98	-41.94
1735.8	1.66	-41.94	1735.7	.92	-41.94	1735.3	1.75	-41.94
1735.8	2.43	-41.93	1735.7	1.35	-41.92	1736.0	1.79	-41.90
1735.8	1.90	-41.90	1735.6	.96	-41.89	1735.8	1.96	-41.88
1736.5	1.82	-41.88	1735.7	1.19	-41.88	1735.7	1.50	-41.88
1735.6	.83	-41.87	1735.8	2.07	-41.86	1735.8	1.65	-41.85
1735.8	2.39	-41.85	1735.7	1.33	-41.83	1735.7	.79	-41.83
1735.7	1.73	-41.82	1735.8	1.86	-41.82	1735.7	1.48	-41.82
1735.7	.89	-41.82	1735.7	1.17	-41.81	1735.9	1.78	-41.81
1737.0	1.94	-41.79	1735.9	2.19	-41.79	1735.7	.93	-41.78
1735.7	1.06	-41.78	1735.7	.88	-41.77	1735.8	1.83	-41.76
1735.8	1.62	-41.76	1735.8	1.92	-41.75	1735.7	.74	-41.74
1735.8	1.71	-41.74	1735.7	1.32	-41.73	1735.7	1.15	-41.73

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.8	1.47	-41.73	1735.7	.81	-41.71	1735.8	2.05	-41.71
1735.8	1.89	-41.70	1735.8	1.60	-41.69	1735.6	.88	-41.69
1735.9	2.16	-41.68	1735.8	1.46	-41.67	1735.7	1.29	-41.66
1735.8	.86	-41.66	1735.9	1.73	-41.66	1737.0	1.05	-41.66
1735.8	1.91	-41.66	1735.7	1.16	-41.65	1735.8	1.79	-41.65
1735.8	1.61	-41.64	1735.7	.73	-41.64	1735.8	.92	-41.62
1735.8	1.85	-41.62	1735.9	2.36	-41.61	1735.8	1.45	-41.61
1735.9	1.03	-41.61	1735.8	1.79	-41.61	1735.8	1.77	-41.61
1735.7	.80	-41.60	1735.9	2.14	-41.59	1735.8	2.02	-41.58
1735.7	1.27	-41.57	1735.8	1.90	-41.57	1735.8	.74	-41.56
1736.0	1.69	-41.56	1735.8	.82	-41.55	1735.8	1.83	-41.55
1735.8	1.78	-41.54	1735.8	1.59	-41.54	1735.7	.89	-41.53
1735.7	.99	-41.53	1735.8	1.42	-41.52	1735.7	.83	-41.51
1735.9	1.85	-41.50	1735.7	1.13	-41.50	1735.8	1.74	-41.50
1736.7	1.27	-41.48	1735.8	.71	-41.47	1735.9	1.68	-41.46
1735.9	2.32	-41.45	1735.8	1.55	-41.45	1735.7	2.01	-41.45
1735.9	1.85	-41.44	1735.9	1.75	-41.44	1735.8	.81	-41.44
1735.9	1.43	-41.43	1735.8	.85	-41.42	1737.4	1.81	-41.41
1735.8	1.08	-41.40	1735.8	.95	-41.40	1735.8	.78	-41.39
1735.9	2.10	-41.39	1735.8	.65	-41.39	1735.8	.74	-41.39
1735.8	2.00	-41.39	1735.9	2.31	-41.36	1735.9	1.41	-41.35
1735.8	1.66	-41.35	1735.6	.63	-41.35	1735.9	1.72	-41.34
1735.8	.84	-41.33	1735.9	1.08	-41.33	1735.8	1.55	-41.33
1735.4	1.23	-41.33	1735.9	1.82	-41.32	1735.9	.94	-41.32
1735.9	1.63	-41.31	1735.8	1.69	-41.31	1735.8	.74	-41.30
1735.7	.79	-41.30	1735.1	1.97	-41.30	1736.0	1.51	-41.28
1735.7	1.07	-41.28	1735.8	.66	-41.28	1735.9	2.30	-41.27
1735.9	1.78	-41.25	1735.8	.64	-41.24	1735.8	.81	-41.24
1735.8	1.35	-41.24	1735.9	1.63	-41.23	1735.1	1.97	-41.22
1735.9	.91	-41.22	1735.9	1.71	-41.22	1736.0	.70	-41.20
1735.9	1.77	-41.19	1735.9	1.48	-41.19	1735.7	1.64	-41.19
1735.9	2.05	-41.19	1736.0	2.27	-41.17	1735.8	1.67	-41.17
1735.9	1.35	-41.17	1735.9	1.63	-41.17	1735.9	1.65	-41.16
1735.9	2.06	-41.15	1735.9	1.60	-41.14	1735.9	.78	-41.14
1736.0	1.74	-41.13	1736.0	.71	-41.13	1736.0	.62	-41.11
1735.9	1.65	-41.10	1735.8	1.69	-41.10	1735.9	.78	-41.10
1735.9	1.79	-41.10	1735.9	2.26	-41.10	1736.3	.89	-41.09
1735.9	1.49	-41.08	1735.9	2.04	-41.08	1736.0	1.63	-41.07
1736.4	.87	-41.06	1736.0	.73	-41.06	1735.5	.56	-41.05
1735.9	1.72	-41.05	1735.8	1.35	-41.03	1736.1	1.94	-41.02
1735.9	1.58	-41.02	1736.7	2.22	-41.01	1735.9	1.74	-41.01
1736.2	1.68	-41.00	1735.9	1.45	-40.99	1736.4	.69	-40.98
1735.9	1.16	-40.97	1736.2	2.01	-40.97	1735.9	.98	-40.96
1736.3	.87	-40.95	1735.1	1.56	-40.95	1736.2	1.92	-40.95
1736.1	1.77	-40.93	1736.2	2.01	-40.93	1736.1	.84	-40.93
1736.2	1.59	-40.92	1736.1	1.64	-40.91	1735.6	.99	-40.91
1736.3	1.67	-40.90	1736.2	2.22	-40.88	1736.1	1.74	-40.88
1735.6	1.29	-40.88	1735.5	1.44	-40.86	1736.2	1.56	-40.86
1736.1	1.64	-40.86	1736.1	1.64	-40.82			

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1735.8	-2.93	-44.82	1735.5	-2.92	-44.82	1735.4	-2.59	-44.81
1736.5	-2.46	-44.80	1735.4	-2.26	-44.77	1735.9	-2.94	-44.76
1736.3	-2.00	-44.68	1735.3	-2.65	-44.67	1735.4	-2.01	-44.63
1736.5	-1.28	-44.63	1736.4	-1.81	-44.61	1735.2	-2.67	-44.60
1735.9	-2.33	-44.59	1736.6	-1.83	-44.59	1736.1	-2.33	-44.59
1736.1	-1.61	-44.57	1736.0	-1.69	-44.57	1735.5	-2.51	-44.56
1736.0	-2.55	-44.56	1735.8	-2.50	-44.55	1736.0	-1.90	-44.55
1735.6	-2.52	-44.53	1735.9	-2.54	-44.53	1736.2	-1.95	-44.53
1735.0	-2.67	-44.52	1736.2	-2.06	-44.50	1735.9	-2.55	-44.50
1735.9	-2.04	-44.49	1735.3	-2.71	-44.49	1736.0	-1.83	-44.49
1735.6	-1.73	-44.48	1736.0	-1.83	-44.47	1736.0	-1.61	-44.47
1736.5	-2.32	-44.46	1735.8	-2.34	-44.45	1736.0	-1.92	-44.45
1735.3	-2.71	-44.45	1735.3	-2.71	-44.45	1735.4	-2.26	-44.45
1736.1	-1.87	-44.42	1735.7	-2.51	-44.42	1735.6	-2.54	-44.41
1736.4	-1.75	-44.41	1736.0	-1.33	-44.41	1735.9	-2.37	-44.39
1735.5	-2.33	-44.39	1736.4	-3.02	-44.37	1735.8	-2.36	-44.36
1735.8	-2.39	-44.35	1735.8	-2.38	-44.35	1735.3	-2.56	-44.35
1735.7	-2.36	-44.35	1735.8	-2.56	-44.35	1735.7	-2.58	-44.34
1735.9	-1.65	-44.34	1735.8	-1.96	-44.34	1735.3	-2.04	-44.31
1735.2	-3.01	-44.31	1735.7	-2.05	-44.30	1735.8	-2.38	-44.30
1735.9	-1.35	-44.29	1735.1	-2.38	-44.29	1735.6	-2.62	-44.29
1735.4	-2.00	-44.29	1735.7	-1.98	-44.29	1735.6	-2.09	-44.29
1735.8	-2.62	-44.28	1735.1	-1.90	-44.28	1735.6	-1.77	-44.28
1735.7	-2.36	-44.27	1735.8	-2.00	-44.26	1735.1	-2.71	-44.25
1735.8	-2.17	-44.23	1735.6	-2.08	-44.23	1735.8	-3.01	-44.23
1735.4	-2.35	-44.23	1735.7	-2.59	-44.23	1735.9	-2.61	-44.23
1735.8	-2.62	-44.22	1736.4	-3.05	-44.22	1735.7	-2.12	-44.19
1735.9	-1.69	-44.18	1735.6	-1.89	-44.17	1735.7	-2.60	-44.17
1735.4	-2.58	-44.16	1735.5	-3.07	-44.16	1735.8	-2.02	-44.15
1735.5	-2.57	-44.15	1735.8	-1.98	-44.14	1735.5	-2.57	-44.14
1735.6	-1.91	-44.13	1735.9	-1.70	-44.13	1735.7	-1.79	-44.11
1735.7	-2.62	-44.10	1735.7	-2.63	-44.10	1735.4	-2.61	-44.10
1735.3	-2.59	-44.10	1735.4	-2.38	-44.07	1736.4	-2.39	-44.07
1735.8	-2.44	-44.06	1735.4	-2.06	-44.05	1735.6	-2.43	-44.05
1735.6	-2.16	-44.05	1735.2	-1.96	-44.05	1735.0	-2.75	-44.04
1735.1	-1.79	-44.04	1735.8	-2.48	-44.04	1735.8	-1.70	-44.04
1735.6	-2.13	-44.04	1735.3	-2.82	-44.03	1735.4	-1.40	-44.03
1735.6	-1.93	-44.01	1735.8	-2.49	-44.01	1735.2	-1.85	-44.01

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.7	-2.63	-43.98	1735.5	-2.42	-43.98	1735.3	-2.78	-43.95
1735.8	-1.73	-43.93	1735.6	-3.12	-43.92	1735.1	-1.43	-43.92
1735.6	-2.42	-43.92	1735.2	-1.80	-43.91	1735.6	-2.66	-43.90
1734.7	-2.17	-43.90	1735.7	-2.46	-43.88	1735.6	-1.96	-43.87
1735.9	-2.08	-43.86	1735.5	-3.14	-43.84	1735.5	-2.83	-43.82
1735.9	-2.06	-43.80	1735.7	-2.21	-43.79	1735.7	-1.43	-43.79
1735.6	-2.66	-43.79	1735.7	-2.50	-43.79	1735.7	-2.08	-43.78
1735.6	-1.99	-43.77	1735.9	-2.07	-43.77	1735.5	-1.89	-43.75
1735.5	-2.09	-43.73	1735.3	-3.17	-43.73	1735.7	-2.86	-43.72
1735.5	-1.87	-43.70	1735.5	-1.91	-43.66	1735.6	-2.71	-43.65
1735.9	-2.12	-43.65	1736.4	-2.02	-43.64	1735.6	-1.80	-43.64
1735.7	-3.18	-43.63	1735.6	-2.89	-43.62	1735.5	-2.12	-43.61
1735.7	-3.16	-43.60	1735.6	-2.52	-43.59	1735.7	-3.18	-43.59
1735.5	-1.92	-43.57	1735.6	-2.88	-43.57	1735.4	-1.81	-43.55
1735.5	-2.74	-43.55	1735.6	-2.88	-43.53	1735.7	-3.19	-43.52
1735.5	-2.54	-43.51	1735.4	-2.16	-43.51	1735.5	-2.06	-43.50
1735.4	-2.27	-43.49	1735.8	-3.20	-43.48	1735.7	-2.24	-43.48
1735.4	-2.77	-43.45	1735.6	-2.90	-43.45	1735.5	-2.56	-43.43
1735.5	-1.53	-43.43	1735.4	-1.96	-43.43	1735.7	-3.23	-43.42
1734.7	-2.28	-43.42	1735.4	-2.61	-43.37	1735.4	-2.18	-43.37
1735.1	-2.06	-43.37	1735.5	-2.76	-43.36	1735.7	-2.93	-43.35
1735.5	-2.59	-43.35	1735.4	-2.00	-43.32	1735.7	-3.24	-43.31
1734.5	-2.29	-43.31	1735.2	-2.81	-43.29	1735.0	-2.10	-43.29
1735.4	-2.05	-43.29	1735.4	-1.93	-43.28	1735.7	-2.96	-43.27
1735.4	-1.56	-43.27	1735.4	-3.24	-43.26	1735.4	-2.21	-43.25
1734.6	-2.11	-43.24	1735.6	-2.61	-43.23	1736.2	-3.27	-43.21
1735.7	-2.01	-43.21	1735.8	-2.81	-43.20	1735.6	-2.96	-43.20
1735.3	-1.58	-43.20	1735.5	-2.16	-43.18	1735.4	-2.31	-43.15
1735.7	-2.98	-43.15	1735.6	-3.28	-43.15	1735.5	-2.66	-43.15
1735.6	-2.35	-43.14	1735.7	-2.01	-43.13	1735.8	-3.30	-43.13
1733.9	-2.11	-43.13	1735.7	-2.98	-43.10	1735.5	-2.32	-43.08
1735.6	-2.03	-43.03	1735.7	-2.84	-43.02	1735.6	-2.25	-43.01
1735.6	-2.65	-43.00	1735.8	-3.00	-42.99	1735.7	-2.67	-42.99
1735.6	-2.34	-42.94	1735.5	-2.05	-42.94	1735.8	-2.66	-42.93
1735.7	-2.39	-42.93	1735.7	-3.32	-42.91	1735.7	-2.99	-42.91
1735.6	-2.18	-42.88	1735.7	-2.27	-42.87	1735.6	-2.09	-42.85
1735.8	-3.35	-42.85	1735.8	-2.88	-42.85	1735.8	-2.72	-42.85
1735.9	-2.43	-42.81	1735.8	-3.02	-42.81	1735.8	-2.29	-42.78
1736.1	-2.73	-42.77	1736.2	-2.73	-42.77	1735.9	-3.37	-42.75
1736.2	-2.44	-42.75	1735.9	-2.91	-42.75	1735.7	-2.10	-42.73
1735.8	-3.04	-42.73	1735.7	-2.74	-42.70	1735.9	-2.33	-42.69
1736.3	-2.75	-42.69	1736.5	-3.37	-42.66	1735.6	-2.11	-42.66
1736.0	-2.92	-42.64	1736.0	-2.77	-42.63	1735.7	-2.24	-42.62
1735.9	-2.33	-42.61	1736.1	-2.92	-42.60	1735.9	-3.38	-42.59
1736.4	-2.76	-42.59	1735.9	-3.09	-42.59	1735.7	-2.12	-42.58
1736.0	-2.35	-42.53	1735.6	-2.28	-42.53	1735.9	-3.11	-42.52
1735.9	-2.46	-42.49	1736.2	-2.77	-42.48	1735.9	-2.35	-42.48
1736.5	-1.75	-42.47	1736.3	-3.43	-42.44	1735.6	-2.14	-42.44
1735.8	-2.47	-42.42	1735.4	-2.29	-42.42	1736.0	-3.14	-42.41
1735.9	-2.80	-42.38	1734.2	-2.39	-42.38	1736.2	-2.99	-42.34
1735.8	-2.18	-42.33	1735.8	-2.51	-42.32	1736.6	-3.14	-42.30
1735.3	-2.39	-42.29	1735.6	-2.31	-42.29	1736.2	-2.83	-42.29
1736.4	-3.45	-42.28	1734.9	-2.18	-42.26	1735.5	-2.52	-42.22
1735.7	-2.20	-42.22	1736.6	-3.49	-42.21	1735.8	-2.42	-42.19
1736.0	-3.02	-42.18	1735.6	-2.34	-42.18	1737.4	-3.16	-42.17
1735.7	-2.44	-42.14	1735.7	-2.53	-42.11	1736.3	-3.02	-42.10
1735.6	-2.35	-42.06	1737.2	-2.86	-42.03	1735.5	-2.23	-42.03
1736.4	-2.46	-42.01	1737.0	-2.27	-41.92	1736.3	-2.40	-41.92
1736.4	-2.46	-42.01						

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1736.5	1.74	-2.69	1736.5	1.69	-2.63	1736.2	2.06	-2.62
1736.0	1.90	-2.61	1736.2	2.21	-2.56	1735.9	1.91	-2.55
1735.9	1.77	-2.55	1736.3	1.67	-2.53	1735.2	1.75	-2.52
1736.3	2.13	-2.51	1736.3	2.15	-2.51	1735.7	2.04	-2.51
1736.1	1.75	-2.47	1736.3	1.66	-2.45	1736.2	2.37	-2.45
1736.2	1.87	-2.44	1737.0	2.48	-2.44	1736.3	2.20	-2.44
1736.5	2.00	-2.43	1736.3	1.63	-2.43	1736.2	2.19	-2.41
1736.3	1.65	-2.40	1735.7	2.37	-2.39	1736.2	1.86	-2.39
1736.4	1.99	-2.38	1736.7	2.22	-2.37	1736.3	2.09	-2.37
1736.3	1.61	-2.36	1736.2	2.44	-2.35	1736.4	2.19	-2.35
1737.4	2.64	-2.33	1736.6	2.47	-2.33	1736.1	1.69	-2.31
1736.5	2.00	-2.30	1736.5	2.43	-2.30	1737.0	2.76	-2.29
1736.3	2.20	-2.29	1736.3	1.61	-2.28	1736.3	2.08	-2.28
1736.3	1.84	-2.28	1736.3	1.70	-2.28	1737.1	2.61	-2.28
1736.9	3.06	-2.27	1737.0	2.91	-2.27	1737.1	2.61	-2.25
1736.5	2.33	-2.25	1736.4	2.17	-2.24	1736.3	1.68	-2.23
1736.4	2.15	-2.23	1736.3	2.07	-2.21	1737.0	2.89	-2.21
1736.4	2.19	-2.21	1736.7	2.45	-2.20	1736.3	1.81	-2.19
1736.4	2.18	-2.19	1736.4	2.12	-2.19	1736.4	1.67	-2.18
1737.0	2.61	-2.18	1737.0	3.01	-2.18	1736.5	1.97	-2.18
1736.7	2.43	-2.17	1736.5	1.95	-2.17	1736.4	2.32	-2.17
1736.4	2.03	-2.16	1737.0	2.74	-2.16	1736.5	2.11	-2.16
1736.4	1.58	-2.15	1736.4	1.68	-2.14	1736.5	1.96	-2.13
1736.7	2.43	-2.12	1736.5	2.13	-2.11	1736.4	2.18	-2.11
1736.6	2.29	-2.10	1736.9	2.85	-2.10	1736.8	2.59	-2.09
1736.4	2.08	-2.08	1737.1	2.72	-2.08	1736.4	1.66	-2.07
1736.7	2.40	-2.07	1736.9	2.99	-2.07	1736.4	2.04	-2.07
1736.6	2.11	-2.06	1737.2	1.79	-2.06	1736.5	2.15	-2.06

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.9	2.87	-2.04	1736.4	1.56	-2.03	1736.5	1.92	-2.02
1736.3	1.65	-2.02	1736.6	2.08	-2.01	1736.8	2.55	-2.01
1736.5	2.01	-2.00	1736.4	1.78	-2.00	1736.9	2.71	-1.99
1736.6	2.27	-1.99	1736.9	2.85	-1.99	1736.6	2.15	-1.98
1736.5	1.92	-1.98	1736.7	2.39	-1.98	1736.5	1.63	-1.98
1736.5	2.02	-1.98	1736.8	2.97	-1.97	1736.5	2.11	-1.96
1736.5	1.77	-1.95	1736.5	1.54	-1.94	1736.8	2.56	-1.92
1736.5	1.63	-1.92	1736.6	2.14	-1.91	1736.6	2.27	-1.91
1736.9	2.70	-1.91	1736.7	2.38	-1.90	1736.5	2.01	-1.89
1736.5	1.89	-1.89	1736.5	2.09	-1.89	1736.5	1.98	-1.87
1736.3	1.53	-1.87	1736.8	2.80	-1.87	1736.6	2.06	-1.86
1736.4	2.11	-1.86	1736.6	1.61	-1.85	1736.8	2.96	-1.85
1736.5	1.89	-1.85	1736.7	2.55	-1.85	1736.7	2.37	-1.85
1736.6	2.25	-1.84	1736.8	2.69	-1.83	1736.5	1.52	-1.83
1736.6	1.74	-1.82	1736.5	2.00	-1.81	1736.7	2.36	-1.81
1736.5	1.87	-1.81	1736.6	2.05	-1.81	1736.6	2.26	-1.79
1736.8	2.93	-1.79	1736.6	1.59	-1.79	1736.7	2.36	-1.78
1736.5	1.97	-1.78	1736.7	2.23	-1.77	1736.7	2.53	-1.77
1736.6	2.10	-1.75	1736.5	1.87	-1.74	1736.5	2.05	-1.73
1736.8	2.80	-1.73	1736.7	2.66	-1.73	1736.6	2.34	-1.73
1736.6	1.98	-1.72	1736.7	1.52	-1.72	1736.7	2.52	-1.72
1736.6	2.01	-1.71	1736.6	1.74	-1.71	1736.7	2.94	-1.70
1736.7	1.59	-1.69	1736.6	2.04	-1.67	1736.5	1.88	-1.66
1736.8	2.51	-1.66	1736.7	1.50	-1.66	1736.6	2.21	-1.65
1736.7	1.71	-1.65	1736.6	1.98	-1.63	1736.8	2.78	-1.63
1736.8	1.60	-1.62	1736.8	1.64	-1.62	1736.8	2.89	-1.61
1736.6	2.32	-1.61	1736.7	2.63	-1.61	1736.6	2.50	-1.60
1736.6	2.11	-1.60	1736.8	1.48	-1.59	1736.5	2.05	-1.58
1736.4	1.61	-1.58	1736.8	1.71	-1.58	1736.8	1.57	-1.57
1736.9	2.77	-1.55	1736.8	1.86	-1.55	1736.9	1.64	-1.55
1736.6	2.48	-1.54	1736.6	1.98	-1.54	1736.6	2.62	-1.54
1737.0	1.46	-1.51	1736.5	2.03	-1.51	1736.7	2.88	-1.51
1736.6	2.31	-1.50	1736.8	1.70	-1.48	1736.6	1.94	-1.48
1736.6	2.08	-1.48	1736.9	1.55	-1.48	1736.9	2.75	-1.45
1736.3	1.82	-1.45	1736.7	1.93	-1.44	1736.6	2.59	-1.43
1736.6	2.01	-1.43	1736.5	2.28	-1.42	1737.0	1.45	-1.42
1736.6	1.91	-1.41	1736.6	2.45	-1.40	1736.5	1.97	-1.40
1736.8	2.88	-1.40	1736.9	1.68	-1.39	1736.8	2.74	-1.39
1736.5	2.07	-1.38	1736.6	2.17	-1.37	1736.5	2.28	-1.36
1737.0	1.54	-1.36	1736.7	2.87	-1.35	1736.6	1.91	-1.34
1737.1	1.43	-1.34	1736.6	2.05	-1.34	1737.0	1.67	-1.33
1736.6	2.42	-1.32	1736.9	2.73	-1.32	1736.2	1.80	-1.31
1736.5	1.99	-1.31	1736.5	2.26	-1.29	1736.7	2.56	-1.27
1736.9	2.85	-1.26	1736.4	2.14	-1.25	1736.5	2.41	-1.25
1736.2	1.78	-1.24	1736.2	1.96	-1.24	1736.7	2.73	-1.22
1736.4	1.89	-1.21	1736.2	2.01	-1.21	1736.2	1.78	-1.17
1736.4	2.55	-1.16	1736.9	2.84	-1.15	1736.2	2.41	-1.14
1736.1	2.12	-1.14	1736.2	1.95	-1.13	1736.7	1.77	-1.11
1736.3	2.70	-1.11	1736.1	1.99	-1.09	1736.4	2.22	-1.09
1736.4	2.53	-1.09	1736.0	2.13	-1.07	1736.1	2.68	-1.07
1736.2	2.38	-1.06	1736.3	1.92	-1.06	1735.8	1.86	-1.04
1736.2	1.96	-1.03	1736.6	2.83	-1.03	1736.5	2.22	-1.02
1736.4	2.53	-1.01	1736.2	2.67	-.99	1736.1	2.37	-.98
1736.5	2.81	-.97	1736.3	2.68	-.96	1736.4	2.20	-.96
1736.4	2.50	-.94						

LUNAR ORBITER PHOTOGRAPHIC SITE II P 3AB

1737.7	3.67	20.39	1736.5	3.78	20.41	1736.2	4.21	20.41
1736.2	4.33	20.42	1737.5	3.88	20.42	1736.4	4.20	20.45
1736.5	4.00	20.48	1736.7	4.51	20.49	1736.5	3.77	20.49
1736.4	4.10	20.50	1735.8	4.74	20.50	1735.9	4.65	20.50
1736.4	3.61	20.50	1735.9	4.66	20.51	1736.2	4.39	20.51
1736.5	4.55	20.51	1736.3	4.00	20.51	1735.8	4.62	20.51
1736.4	3.86	20.52	1736.2	4.19	20.52	1736.2	4.29	20.54
1736.3	3.98	20.55	1736.4	4.81	20.56	1736.1	4.38	20.57
1736.4	4.56	20.57	1736.3	4.05	20.57	1736.9	5.02	20.58
1736.1	4.49	20.58	1736.3	4.16	20.59	1736.5	3.75	20.59
1736.2	3.97	20.60	1736.3	4.72	20.61	1736.4	4.28	20.61
1736.3	4.05	20.61	1736.3	3.86	20.61	1736.1	4.53	20.61
1736.3	3.61	20.61	1736.0	4.37	20.62	1736.2	4.91	20.62
1736.1	4.65	20.63	1736.3	4.16	20.64	1736.4	3.72	20.64
1736.2	4.58	20.64	1736.0	3.94	20.65	1736.0	4.48	20.65
1736.7	4.82	20.65	1736.1	4.05	20.66	1736.1	4.59	20.66
1736.3	4.28	20.66	1736.4	5.18	20.67	1736.1	4.53	20.68
1736.2	3.58	20.68	1736.8	5.02	20.69	1736.5	4.89	20.69
1736.0	3.82	20.70	1736.3	3.72	20.70	1736.1	4.62	20.71
1736.0	4.34	20.71	1736.1	4.79	20.72	1736.2	4.26	20.72
1736.1	4.70	20.72	1736.1	4.48	20.73	1736.5	5.15	20.73
1736.5	4.98	20.74	1736.0	3.94	20.75	1736.0	4.04	20.75
1736.1	4.58	20.76	1735.9	4.52	20.78	1736.0	4.67	20.78
1736.0	4.13	20.78	1736.1	4.78	20.78	1736.3	4.37	20.79
1736.4	4.88	20.79	1736.1	4.25	20.79	1736.1	4.45	20.79
1735.9	3.70	20.80	1736.0	3.82	20.81	1736.0	3.55	20.81
1736.0	4.01	20.82	1736.2	4.51	20.82	1736.4	5.13	20.83
1736.3	4.98	20.83	1736.1	4.33	20.83	1736.2	4.56	20.84
1736.3	4.74	20.84	1736.4	4.51	20.84	1735.9	4.66	20.86
1735.9	3.54	20.86	1736.3	4.85	20.86	1735.9	4.11	20.86
1735.9	3.90	20.86	1736.2	4.74	20.86	1736.0	4.43	20.86
1736.0	4.24	20.87	1735.9	3.76	20.87	1735.9	3.99	20.87

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.1	4.57	20.88	1735.9	3.68	20.88	1735.9	4.13	20.89
1736.1	4.47	20.89	1736.3	5.11	20.90	1736.2	4.86	20.91
1736.2	4.53	20.91	1736.4	4.61	20.91	1735.8	3.55	20.91
1736.0	4.66	20.92	1736.2	4.51	20.92	1736.0	4.23	20.92
1736.3	4.58	20.94	1736.1	4.74	20.94	1735.8	3.67	20.94
1736.1	4.94	20.95	1736.1	4.33	20.95	1736.2	4.47	20.95
1735.8	3.78	20.95	1735.8	3.90	20.96	1736.2	5.09	20.97
1735.8	3.97	20.97	1736.2	4.48	20.98	1735.7	3.53	20.98
1736.1	4.83	20.98	1735.8	4.11	20.98	1736.1	4.45	20.99
1735.8	3.88	20.99	1736.1	4.71	20.99	1736.0	4.64	20.99
1736.2	4.93	21.00	1735.7	3.66	21.00	1735.8	4.08	21.00
1736.1	4.39	21.00	1736.1	4.56	21.01	1735.9	4.28	21.01
1736.1	4.52	21.01	1735.7	3.76	21.01	1736.1	4.50	21.03
1736.8	4.20	21.04	1736.2	4.46	21.04	1736.0	4.64	21.04
1736.1	5.11	21.04	1736.0	4.84	21.05	1736.1	4.73	21.05
1736.2	4.91	21.05	1735.9	4.28	21.05	1736.1	4.56	21.06
1735.7	4.06	21.06	1735.7	3.96	21.07	1736.0	4.48	21.07
1735.7	3.87	21.07	1736.0	4.55	21.08	1736.0	4.39	21.08
1735.6	3.50	21.08	1736.0	5.09	21.09	1735.5	3.62	21.09
1736.1	5.10	21.10	1736.0	4.82	21.10	1736.0	4.44	21.10
1735.8	4.20	21.11	1735.9	4.59	21.11	1735.6	3.73	21.12
1735.4	4.48	21.12	1735.7	4.06	21.12	1735.8	4.27	21.12
1736.0	4.68	21.12	1735.9	5.06	21.14	1736.3	4.55	21.14
1734.6	4.51	21.14	1735.6	3.87	21.14	1736.0	4.81	21.14
1736.0	4.39	21.14	1736.1	5.08	21.14	1736.0	4.71	21.15
1735.6	4.04	21.15	1735.9	5.06	21.16	1735.4	3.63	21.16
1736.0	4.90	21.16	1735.6	3.95	21.16	1735.6	4.15	21.17
1735.5	3.47	21.17	1735.7	4.27	21.18	1736.0	4.44	21.18
1735.9	4.92	21.19	1736.0	4.70	21.19	1735.9	4.57	21.20
1736.0	4.79	21.20	1735.9	4.38	21.20	1735.6	4.24	21.20
1736.0	4.47	21.21	1735.6	4.02	21.21	1736.1	4.52	21.21
1736.0	4.49	21.21	1735.6	4.14	21.21	1735.4	3.71	21.21
1735.8	4.37	21.23	1735.9	5.05	21.23	1736.1	4.91	21.23
1735.2	3.60	21.24	1735.9	4.67	21.24	1735.5	3.84	21.24
1735.8	4.40	21.24	1735.3	3.44	21.25	1735.9	4.47	21.25
1736.0	4.77	21.25	1735.5	3.92	21.26	1735.9	4.51	21.26
1735.4	3.70	21.26	1735.8	4.58	21.26	1735.5	4.13	21.26
1735.8	4.34	21.27	1735.3	4.26	21.28	1735.8	4.46	21.28
1735.5	4.02	21.28	1735.2	3.57	21.28	1735.8	4.65	21.29
1735.5	3.93	21.30	1735.9	4.90	21.30	1736.0	5.05	21.30
1735.8	4.57	21.30	1735.3	3.69	21.31	1736.0	5.04	21.31
1735.5	4.13	21.31	1735.8	4.47	21.31	1735.3	4.36	21.32
1735.7	4.34	21.32	1736.8	4.39	21.32	1735.9	4.75	21.33
1735.5	3.80	21.33	1735.8	4.65	21.34	1735.8	4.49	21.34
1735.8	4.46	21.34	1735.7	4.34	21.35	1735.1	3.45	21.35
1735.9	5.01	21.35	1735.9	4.88	21.36	1735.2	3.57	21.36
1735.4	4.00	21.37	1735.4	3.81	21.37	1735.6	4.21	21.37
1735.2	4.53	21.38	1735.8	4.49	21.38	1735.7	4.34	21.39
1735.7	4.43	21.40	1735.8	4.65	21.40	1735.7	4.38	21.40
1735.4	4.76	21.40	1735.2	3.67	21.41	1735.8	4.55	21.42
1735.7	4.64	21.42	1735.7	4.48	21.42	1735.5	4.12	21.42
1735.8	4.33	21.43	1734.9	3.44	21.44	1735.7	4.39	21.44
1735.4	4.00	21.44	1735.2	3.68	21.45	1735.0	3.54	21.45
1735.7	4.62	21.45	1735.8	4.84	21.46	1735.5	3.89	21.46
1735.6	4.42	21.46	1735.1	3.40	21.46	1735.7	4.46	21.47
1735.5	4.76	21.48	1735.7	4.36	21.48	1735.4	3.98	21.48
1735.0	3.55	21.49	1735.9	5.02	21.49	1735.5	4.21	21.50
1735.4	3.77	21.50	1735.0	3.54	21.50	1735.7	4.31	21.50
1735.5	4.18	21.51	1735.6	4.46	21.51	1735.7	4.53	21.52
1735.4	4.09	21.52	1735.6	4.65	21.53	1735.3	4.82	21.54
1735.0	3.62	21.54	1735.9	4.72	21.54	1735.5	4.29	21.54
1735.5	4.17	21.54	1735.6	4.45	21.56	1735.6	4.59	21.57
1735.8	5.01	21.57	1735.3	3.85	21.57	1735.7	4.32	21.59
1735.7	4.83	21.61	1735.7	4.50	21.61	1735.5	4.27	21.61
1735.3	4.07	21.61	1735.4	4.17	21.62	1735.6	4.33	21.62
1735.2	3.96	21.63	1735.6	4.38	21.63	1735.8	4.70	21.64
1735.5	3.73	21.64	1735.7	4.80	21.65	1735.6	4.44	21.65
1735.8	4.98	21.66	1735.6	4.59	21.66	1735.7	4.49	21.66
1735.2	4.07	21.67	1735.4	4.16	21.67	1734.8	3.62	21.68
1735.5	4.26	21.69	1735.6	4.43	21.69	1735.6	3.72	21.69
1735.5	3.83	21.70	1735.5	4.38	21.70	1735.6	4.58	21.70
1735.5	4.32	21.71	1735.3	3.94	21.71	1735.8	4.70	21.72
1735.7	4.80	21.72	1735.2	3.49	21.73	1735.6	4.42	21.74
1735.4	4.16	21.74	1735.7	4.48	21.74	1735.3	4.03	21.74
1735.5	4.96	21.75	1735.4	4.13	21.76	1735.7	4.68	21.76
1735.4	3.93	21.76	1735.4	4.24	21.76	1734.6	3.36	21.76
1735.5	3.71	21.76	1734.8	3.63	21.77	1735.4	4.31	21.77
1735.3	3.82	21.77	1735.5	4.36	21.78	1735.4	4.03	21.81
1735.8	4.95	21.81	1735.5	4.54	21.81	1735.6	4.47	21.81
1735.9	4.66	21.82	1735.5	4.12	21.82	1735.5	4.30	21.83
1735.4	4.01	21.84	1734.7	3.92	21.85	1735.8	4.78	21.85
1735.7	4.40	21.86	1735.4	3.89	21.87	1735.5	4.11	21.88
1735.4	4.22	21.88	1735.5	4.34	21.88	1734.9	3.44	21.88
1735.9	4.66	21.88	1735.4	4.27	21.89	1735.6	3.69	21.90
1735.6	4.54	21.90	1735.8	4.93	21.90	1735.8	3.78	21.91
1734.0	3.59	21.92	1735.6	4.48	21.92	1735.5	3.89	21.92
1735.6	3.68	21.92	1735.6	4.75	21.93	1735.6	4.52	21.93
1735.8	4.43	21.93	1735.9	4.64	21.93	1735.5	4.09	21.94
1735.6	3.99	21.94	1735.6	4.36	21.94	1735.6	4.21	21.96
1735.5	3.79	21.97	1735.8	4.75	21.97	1735.5	3.98	21.98

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.6	4.25	21.98	1735.8	4.37	21.99	1735.4	3.88	21.99
1735.7	4.45	22.00	1735.5	4.08	22.00	1735.7	4.61	22.00
1734.6	3.65	22.00	1735.7	4.90	22.02	1735.7	4.19	22.02
1735.6	3.76	22.04	1735.5	4.38	22.04	1735.7	4.09	22.05
1735.4	3.88	22.05	1735.6	4.30	22.06	1735.8	4.34	22.06
1735.7	4.17	22.06	1735.6	4.76	22.07	1735.5	4.49	22.08
1735.7	4.25	22.08	1735.9	4.43	22.09	1735.7	4.59	22.10
1735.6	4.47	22.11	1735.6	4.08	22.12	1735.8	3.95	22.13
1735.0	4.26	22.14	1735.3	4.17	22.14	1736.0	4.59	22.15
1735.8	4.44	22.16	1734.7	4.37	22.17	1735.3	4.15	22.18
1735.5	4.30	22.20	1733.8	4.76	22.20	1736.0	4.85	22.22
1735.3	4.32	22.23	1735.9	4.60	22.24	1735.7	4.84	22.30
1735.3	4.32	22.23						

LUNAR ORBITER PHOTOGRAPHIC SITE I P 2

1736.6	-.39	33.88	1735.0	-.05	33.99	1734.9	.10	34.02
1735.8	-.40	34.03	1735.9	.22	34.04	1736.7	.28	34.06
1736.3	.24	34.07	1736.0	.36	34.08	1735.2	-.24	34.08
1736.7	.30	34.09	1735.6	-.38	34.10	1736.7	.58	34.10
1735.4	-.04	34.11	1735.5	.07	34.12	1735.7	.41	34.13
1735.7	.18	34.13	1737.2	.75	34.13	1736.8	-.43	34.15
1736.1	.35	34.15	1735.2	-.23	34.16	1736.1	.56	34.17
1735.8	.24	34.17	1735.6	.05	34.18	1735.4	-.08	34.18
1736.8	.70	34.18	1738.1	.94	34.19	1735.9	.24	34.21
1738.2	.94	34.21	1735.4	-.26	34.21	1736.4	.26	34.22
1736.3	-.44	34.22	1737.0	.71	34.22	1736.4	-.41	34.22
1737.7	.97	34.23	1736.8	.30	34.23	1735.7	-.06	34.23
1735.4	-.25	34.26	1735.3	.20	34.27	1737.6	.93	34.27
1737.1	.67	34.28	1735.2	.06	34.28	1737.0	.37	34.28
1737.6	.91	34.29	1737.3	.66	34.31	1737.2	.50	34.31
1737.5	.90	34.32	1735.4	-.11	34.32	1735.9	-.28	34.32
1735.4	.20	34.32	1735.5	-.00	34.34	1736.0	.29	34.36
1736.6	.36	34.36	1737.6	.50	34.36	1735.5	-.10	34.36
1737.3	.93	34.36	1735.5	.21	34.36	1738.1	.68	34.37
1735.7	-.12	34.37	1736.5	.33	34.37	1735.6	-.00	34.38
1737.6	.90	34.38	1736.1	-.31	34.39	1737.9	.47	34.41
1737.9	.66	34.42	1736.2	-.27	34.42	1735.8	-.12	34.43
1735.8	-.13	34.44	1737.7	.89	34.45	1736.5	-.31	34.45
1736.9	.28	34.46	1737.4	.33	34.47	1738.2	.64	34.47
1736.6	.31	34.48	1738.0	.46	34.49	1735.6	-.31	34.50
1738.4	.62	34.50	1738.3	.47	34.52	1737.5	.22	34.54
1737.4	.25	34.54	1735.8	-.52	34.54	1738.5	.65	34.55
1736.0	-.49	34.55	1737.1	.14	34.55	1737.0	-.15	34.56
1737.6	.34	34.58	1737.1	-.17	34.58	1736.5	-.32	34.58
1736.1	-.52	34.59	1737.8	.44	34.63	1736.3	-.34	34.63
1736.0	-.54	34.64	1736.9	-.18	34.65	1737.1	.12	34.66
1736.6	-.35	34.66	1737.3	.19	34.69	1737.3	.30	34.69
1737.9	.43	34.70	1736.9	-.17	34.72	1736.9	-.34	34.74
1736.3	-.55	34.76	1737.1	.12	34.76	1737.0	-.07	34.77
1736.9	-.16	34.77	1737.0	.57	34.78	1736.4	-.56	34.79
1737.2	.30	34.80	1736.9	.15	34.81	1737.0	.25	34.83
1737.2	.39	34.83	1737.2	.83	34.83	1737.2	.22	34.83
1736.8	-.18	34.84	1737.0	-.20	34.85	1737.1	.35	34.86
1736.9	.18	34.86	1736.9	-.07	34.86	1737.2	.24	34.87
1736.9	-.58	34.87	1736.8	.54	34.88	1737.2	.39	34.90
1736.7	-.09	34.90	1736.3	.08	34.91	1736.8	.57	34.92
1737.0	-.11	34.93	1736.3	.06	34.96	1736.7	-.40	34.97
1736.8	-.22	34.98	1736.6	.79	34.99	1736.6	.18	34.99
1736.3	.06	35.00	1736.7	.54	35.00	1736.7	-.22	35.01
1736.6	.78	35.02	1736.9	.23	35.03	1736.3	.05	35.03
1736.6	.76	35.03	1736.6	-.42	35.03	1736.8	-.61	35.03
1736.6	.17	35.03	1737.0	.33	35.05	1736.7	.15	35.06
1736.3	.09	35.06	1736.9	-.13	35.06	1736.7	.24	35.07
1736.4	.06	35.09	1737.3	.35	35.09	1736.7	.19	35.10
1736.6	.51	35.10	1736.3	-.64	35.11	1736.5	-.45	35.11
1736.7	.15	35.16	1736.6	-.65	35.16	1736.5	.72	35.17
1736.5	.08	35.19	1736.6	.14	35.19	1736.9	.30	35.20
1736.5	.75	35.20	1736.5	-.16	35.22	1736.6	.21	35.22
1736.3	-.65	35.23	1736.5	-.02	35.24	1736.8	.05	35.24
1736.5	-.28	35.25	1736.4	.73	35.25	1736.3	-.49	35.27
1736.4	.50	35.29	1736.5	.30	35.29	1736.4	-.18	35.30
1736.4	.18	35.30	1736.6	.09	35.32	1736.5	.73	35.34
1736.3	-.27	35.35	1736.4	-.07	35.36	1736.4	.03	35.36
1736.4	-.19	35.38	1736.4	.47	35.38	1736.2	.46	35.42
1736.5	.18	35.44	1736.3	-.33	35.44	1736.3	.29	35.44
1736.2	.69	35.45	1736.3	-.22	35.46	1736.6	-.72	35.47
1736.3	.26	35.49	1736.6	.07	35.49	1736.2	.66	35.51
1736.4	-.51	35.52	1736.2	.45	35.52	1736.3	-.21	35.53
1736.3	-.12	35.53	1736.4	.02	35.56	1736.3	-.08	35.57
1736.2	.25	35.57	1736.3	-.37	35.58	1737.0	-.73	35.60
1736.2	.13	35.61	1736.1	.65	35.63	1736.2	.40	35.64
1736.9	.03	35.64	1736.2	.25	35.66	1736.3	-.08	35.66
1736.4	-.12	35.67	1736.2	.39	35.67	1736.2	.10	35.67
1736.9	-.74	35.67	1736.3	-.24	35.70	1736.4	-.08	35.71
1736.2	.10	35.73	1736.4	-.16	35.74	1736.6	-.02	35.75
1736.0	.24	35.75	1736.0	.40	35.76	1737.5	-.77	35.76
1736.5	-.28	35.77	1736.0	.62	35.77	1736.7	-.59	35.80
1736.7	-.57	35.81	1736.6	-.13	35.84	1736.6	-.18	35.86
1736.6	-.31	35.87	1736.3	.22	35.87	1737.0	-.81	35.87

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.6	-.04	35.87	1736.6	-.01	35.88	1736.0	.58	35.88
1736.9	-.63	35.91	1736.0	.34	35.91	1736.7	-.45	35.92
1736.6	-.30	35.93	1736.3	.06	35.94	1736.5	-.18	35.94
1736.5	-.07	35.95	1736.6	-.11	35.97	1736.4	.19	35.97
1736.6	.01	35.98	1737.1	-.80	35.98	1736.0	.56	35.98
1737.0	-.63	35.99	1736.5	-.13	36.02	1737.2	.03	36.02
1736.9	-.35	36.05	1736.3	.31	36.06	1737.2	-.82	36.06
1736.4	.16	36.06	1736.6	-.21	36.08	1736.9	-.36	36.09
1737.3	-.84	36.11	1736.4	.01	36.11	1736.8	-.49	36.11
1736.1	.54	36.12	1736.4	.29	36.15	1737.1	-.67	36.16
1736.5	-.23	36.17	1736.4	-.14	36.18	1736.4	-.09	36.19
1736.7	-.49	36.19	1736.4	.27	36.21	1736.9	-.87	36.21
1737.2	-.68	36.22	1736.0	.51	36.23	1736.3	-.13	36.24
1736.7	-.38	36.24	1736.2	.11	36.25	1737.2	-.70	36.28
1736.3	-.17	36.29	1736.7	-.51	36.30	1736.7	-.54	36.31
1736.0	.50	36.31	1736.3	-.08	36.32	1736.3	-.24	36.33
1736.3	-.00	36.34	1737.0	-.90	36.34	1736.5	-.40	36.36
1736.8	-.55	36.37	1736.2	.11	36.38	1736.4	-.18	36.39
1736.2	.26	36.42	1736.4	-.15	36.43	1737.0	-.72	36.44
1736.3	-.04	36.45	1736.0	.46	36.45	1736.4	-.32	36.45
1737.2	-.91	36.46	1736.1	.07	36.46	1736.9	-.56	36.49
1737.2	-.90	36.49	1736.5	-.26	36.49	1737.2	-.74	36.50
1736.5	-.12	36.50	1737.2	-.76	36.52	1736.3	.19	36.54
1736.7	-.47	36.54	1736.4	-.22	36.54	1736.1	.48	36.55
1736.1	.47	36.57	1736.5	-.34	36.57	1736.5	-.18	36.58
1736.7	-.29	36.62	1736.0	.05	36.64	1737.4	-.60	36.66
1736.0	.48	36.67	1736.9	-.29	36.69	1737.2	-.96	36.69
1736.2	.44	36.70	1736.1	.15	36.71	1736.1	.43	36.72
1736.7	-.24	36.72	1737.1	-.49	36.73	1736.8	-.21	36.74
1736.8	-.38	36.75	1736.5	-.16	36.75	1737.7	-.81	36.76
1736.2	.42	36.77	1737.8	-.64	36.82	1736.2	-.35	36.85
1736.3	.12	36.86	1737.5	-.53	36.86	1736.4	-.30	36.86
1736.0	.01	36.87	1737.2	-1.02	36.88	1737.7	-.66	36.89
1736.9	-.54	36.89	1737.8	-.84	36.89	1736.5	-.19	36.90
1736.7	-.25	36.90	1736.2	.37	36.90	1736.7	-.12	36.92
1736.6	-.36	36.94	1736.4	-.02	36.95	1736.5	-.20	36.97
1736.5	-.56	36.98	1737.0	-.42	36.99	1736.4	.34	37.02
1736.7	-.34	37.06	1736.7	-.25	37.06	1736.3	.30	37.11
1735.6	-.06	37.11	1736.0	.06	37.14	1736.4	.30	37.19
1735.6	-.06	37.11						

LUNAR ORBITER PHOTOGRAPHIC SITE V 38

1734.1	33.76	-24.37	1735.4	30.90	-24.27	1734.8	31.40	-24.27
1735.1	31.48	-24.26	1734.5	31.85	-24.25	1735.1	31.20	-24.24
1735.1	31.59	-24.20	1734.3	33.78	-24.18	1734.3	33.79	-24.17
1734.4	32.24	-24.15	1734.6	33.52	-24.14	1734.6	33.51	-24.13
1734.6	32.61	-24.08	1734.7	33.49	-24.06	1734.5	32.99	-24.05
1735.4	33.82	-23.99	1734.6	33.48	-23.97	1733.8	34.01	-23.91
1734.1	34.20	-23.89	1734.1	33.81	-23.82	1734.0	33.52	-23.80
1734.4	33.69	-23.73	1734.9	31.13	-23.58	1735.7	31.54	-23.52
1734.4	32.16	-23.43	1735.0	31.42	-23.41	1734.5	32.76	-23.40
1734.4	32.14	-23.39	1734.5	32.86	-23.37	1734.5	31.77	-23.37
1733.8	33.55	-23.34	1734.3	33.29	-23.33	1734.5	32.96	-23.31
1734.5	34.18	-23.19	1734.0	34.06	-23.18	1734.2	30.86	-22.92
1734.9	30.76	-22.92	1734.8	31.10	-22.90	1733.7	31.39	-22.90
1735.0	31.89	-22.84	1734.7	32.21	-22.80	1734.6	32.43	-22.79
1734.9	31.99	-22.79	1734.8	32.86	-22.76	1734.7	33.52	-22.67
1734.7	33.24	-22.66	1734.8	33.87	-22.60	1735.0	34.13	-22.57
1735.0	30.76	-22.43	1734.9	31.54	-22.38	1735.4	31.26	-22.35
1734.4	33.19	-22.33	1735.2	31.69	-22.32	1735.3	31.47	-22.27
1734.5	33.46	-22.25	1734.6	32.06	-22.25	1735.3	31.44	-22.24
1735.0	31.00	-22.21	1734.8	30.65	-22.21	1734.6	32.53	-22.21
1734.5	33.04	-22.20	1735.0	31.52	-22.17	1735.5	31.13	-22.16
1734.6	32.85	-22.13	1734.7	31.72	-22.12	1734.7	30.82	-22.11
1734.7	31.98	-22.11	1734.9	32.20	-22.08	1734.8	34.16	-22.08
1734.6	34.13	-22.00	1735.3	30.60	-22.00	1734.3	33.15	-21.98
1734.5	32.64	-21.95	1734.8	31.69	-21.94	1735.4	30.85	-21.94
1734.7	32.37	-21.93	1734.3	32.79	-21.93	1734.5	33.52	-21.93
1734.8	31.78	-21.91	1733.0	34.09	-21.91	1735.3	31.09	-21.90
1734.5	33.70	-21.89	1734.4	32.85	-21.88	1734.7	32.21	-21.87
1734.2	33.95	-21.81	1734.5	32.11	-21.81	1734.6	32.48	-21.74
1734.2	33.81	-21.68	1734.5	33.39	-21.66	1734.6	32.86	-21.66
1734.6	33.04	-21.63	1735.7	30.80	-21.63	1734.6	34.06	-21.58
1735.6	31.17	-21.57	1734.9	31.77	-21.57	1735.1	32.14	-21.48
1735.0	32.19	-21.47	1734.9	32.50	-21.45	1734.9	32.37	-21.44
1734.8	33.26	-21.32	1734.6	33.17	-21.31	1734.5	33.05	-21.27
1734.8	33.52	-21.26	1734.5	34.09	-21.24	1735.0	31.72	-21.16
1735.2	31.50	-21.13	1735.0	31.62	-21.12	1735.0	32.12	-21.10
1734.9	32.70	-21.02	1734.9	32.27	-21.01	1734.9	32.96	-20.96
1734.7	33.51	-20.91	1734.8	32.60	-20.90	1734.6	33.58	-20.90
1734.9	33.12	-20.88	1736.0	33.90	-20.78	1734.6	30.66	-20.70
1736.1	31.28	-20.68	1735.5	31.35	-20.66	1735.4	30.94	-20.62
1735.3	31.57	-20.60	1735.3	31.78	-20.54	1735.0	32.21	-20.48
1734.9	32.71	-20.41	1734.9	33.17	-20.39	1734.9	32.58	-20.34
1734.8	32.90	-20.34	1734.8	32.76	-20.33	1735.0	33.56	-20.25
1735.7	30.87	-20.14	1734.8	33.94	-20.08	1735.3	31.22	-19.99
1734.9	31.42	-19.94	1735.2	32.01	-19.92	1735.0	31.85	-19.92
1734.8	32.16	-19.81	1734.9	32.32	-19.77	1734.8	33.05	-19.70
1735.0	33.54	-19.64						

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
			LUNAR ORBITER PHOTOGRAPHIC SITE V 40					
1735.1	12.44	-32.33	1734.1	11.91	-32.32	1735.4	12.83	-32.28
1734.8	12.16	-32.27	1735.5	13.19	-32.23	1735.8	13.82	-32.23
1735.3	12.64	-32.22	1735.5	13.26	-32.20	1736.4	14.17	-32.18
1736.1	14.28	-32.13	1735.3	12.11	-31.93	1735.6	11.89	-31.92
1735.5	12.27	-31.89	1735.4	12.45	-31.89	1735.4	13.03	-31.88
1735.3	12.87	-31.88	1735.3	12.63	-31.87	1735.5	13.34	-31.80
1736.1	14.14	-31.78	1735.7	14.02	-31.78	1735.7	13.61	-31.78
1736.1	14.24	-31.78	1736.0	13.78	-31.76	1736.0	14.05	-31.75
1735.1	11.79	-31.64	1735.2	12.32	-31.61	1735.7	12.08	-31.58
1735.0	12.21	-31.55	1735.5	12.65	-31.55	1736.4	12.51	-31.52
1735.6	12.92	-31.50	1735.7	13.15	-31.48	1735.9	13.83	-31.47
1736.1	13.72	-31.46	1735.6	13.55	-31.43	1736.2	14.08	-31.42
1734.7	11.88	-31.35	1735.4	12.57	-31.33	1735.4	12.51	-31.33
1735.0	12.17	-31.30	1735.0	12.24	-31.30	1735.4	12.47	-31.30
1735.8	13.19	-31.30	1735.4	12.65	-31.29	1735.7	12.99	-31.28
1735.3	12.80	-31.27	1735.6	13.50	-31.24	1735.7	13.31	-31.23
1735.9	13.80	-31.21	1735.0	11.87	-31.18	1736.3	13.94	-31.17
1735.2	12.01	-31.17	1736.4	14.21	-31.14	1735.7	12.58	-31.12
1735.5	12.46	-31.09	1735.5	12.98	-31.05	1735.8	13.53	-31.04
1733.5	11.87	-31.04	1732.5	11.78	-31.02	1735.5	12.33	-31.02
1735.4	12.47	-31.02	1733.4	11.94	-31.00	1735.2	13.17	-31.00
1730.7	11.71	-30.99	1735.8	13.58	-30.98	1731.2	11.77	-30.98
1736.1	13.89	-30.96	1735.9	12.62	-30.94	1736.0	12.85	-30.94
1735.5	12.12	-30.94	1735.9	13.41	-30.91	1735.0	11.71	-30.89
1735.4	12.30	-30.89	1736.1	13.18	-30.89	1736.2	13.86	-30.88
1735.3	11.77	-30.88	1736.0	13.61	-30.88	1735.2	12.17	-30.87
1735.4	13.54	-30.87	1735.8	12.70	-30.85	1735.6	12.38	-30.84
1736.6	13.06	-30.81	1736.8	14.01	-30.80	1735.6	12.96	-30.76
1735.5	13.46	-30.72	1735.4	11.69	-30.72	1735.7	13.92	-30.70
1735.8	13.74	-30.68	1735.6	11.89	-30.68	1735.3	12.04	-30.64
1735.5	12.56	-30.64	1735.6	12.35	-30.63	1735.7	12.25	-30.62
1735.9	13.05	-30.61	1735.8	13.53	-30.56	1735.9	12.87	-30.56
1735.6	13.32	-30.54	1736.1	13.72	-30.52	1735.9	13.45	-30.48
1735.7	11.72	-30.47	1736.2	14.01	-30.47	1736.2	13.83	-30.46
1736.3	14.07	-30.44	1735.9	12.46	-30.41	1735.8	12.55	-30.41
1736.0	12.88	-30.38	1735.8	12.30	-30.38	1735.8	12.68	-30.38
1735.8	12.37	-30.36	1736.1	13.29	-30.33	1736.2	13.39	-30.33
1735.9	13.25	-30.33	1736.1	13.09	-30.32	1736.1	13.13	-30.31
1736.2	13.75	-30.30	1736.2	13.92	-30.27	1736.3	14.03	-30.19
1735.7	11.64	-30.12	1734.7	11.81	-30.11	1735.3	11.97	-30.10
1735.4	12.12	-30.09	1736.0	12.24	-30.09	1734.2	11.72	-30.06
1736.1	12.59	-30.04	1736.1	12.55	-30.02	1736.1	12.93	-30.01
1736.0	12.48	-30.01	1736.4	12.82	-29.98	1736.2	13.09	-29.97
1735.9	13.30	-29.96	1736.0	13.22	-29.93	1735.7	13.35	-29.93
1736.0	13.80	-29.91	1735.7	13.34	-29.90	1736.0	13.49	-29.89
1736.2	14.02	-29.87	1735.3	11.67	-29.72	1736.1	12.30	-29.70
1735.1	11.82	-29.70	1735.6	12.20	-29.66	1736.3	12.85	-29.65
1736.0	12.43	-29.64	1736.0	12.70	-29.64	1736.0	12.91	-29.61
1736.1	13.51	-29.56	1736.2	13.60	-29.55	1736.5	13.79	-29.55
1736.0	13.65	-29.52	1736.1	13.00	-29.52			
			LUNAR ORBITER PHOTOGRAPHIC SITE V 43.2					
1733.7	-18.70	-41.79	1734.1	-18.35	-41.75	1735.1	-18.16	-41.69
1735.0	-17.69	-41.60	1734.7	-17.60	-41.60	1737.8	-16.51	-41.48
1734.8	-15.18	-41.30	1734.8	-14.85	-41.26	1734.8	-15.10	-41.26
1733.0	-18.13	-41.08	1733.5	-18.40	-41.07	1733.2	-18.81	-41.06
1733.2	-18.49	-41.01	1733.0	-17.67	-41.01	1733.0	-17.81	-40.96
1735.3	-17.01	-40.95	1735.3	-16.84	-40.92	1735.8	-16.60	-40.89
1736.3	-16.39	-40.87	1735.5	-16.54	-40.86	1736.3	-15.75	-40.84
1735.6	-15.54	-40.84	1736.4	-15.86	-40.83	1736.0	-15.67	-40.81
1735.1	-15.23	-40.80	1734.1	-14.80	-40.76	1734.0	-14.76	-40.69
1733.6	-18.71	-40.50	1733.4	-18.97	-40.48	1733.1	-18.34	-40.48
1733.1	-18.30	-40.46	1733.7	-18.83	-40.46	1733.0	-17.81	-40.46
1733.0	-18.13	-40.45	1733.2	-18.59	-40.44	1735.1	-17.20	-40.41
1733.1	-17.70	-40.41	1735.3	-17.32	-40.40	1735.1	-16.88	-40.38
1735.1	-17.11	-40.37	1737.5	-15.83	-40.34	1735.1	-16.46	-40.34
1735.3	-16.26	-40.32	1735.1	-16.63	-40.30	1735.7	-15.22	-40.26
1733.4	-18.78	-40.24	1735.7	-15.06	-40.22	1733.5	-18.71	-40.17
1733.1	-18.39	-40.16	1733.1	-18.26	-40.14	1733.1	-18.43	-40.14
1733.3	-19.00	-40.10	1733.2	-18.02	-40.09	1733.6	-18.86	-40.09
1733.2	-17.83	-40.09	1733.3	-18.51	-40.09	1733.1	-17.64	-40.08
1735.6	-16.62	-40.07	1735.4	-17.04	-40.07	1735.4	-17.25	-40.07
1733.2	-18.38	-40.06	1735.4	-17.13	-40.04	1733.5	-18.18	-40.04
1735.9	-16.41	-40.02	1733.5	-18.66	-40.02	1734.2	-15.63	-40.01
1733.5	-17.70	-40.01	1735.9	-16.06	-40.01	1733.4	-18.03	-40.01
1735.4	-17.18	-40.00	1734.4	-15.42	-40.00	1734.3	-15.75	-39.99
1735.1	-15.22	-39.98	1735.1	-15.21	-39.98	1734.4	-15.42	-39.97
1735.5	-14.95	-39.97	1735.4	-17.03	-39.97	1734.9	-15.29	-39.96
1736.0	-16.14	-39.95	1735.7	-16.67	-39.93	1736.6	-16.18	-39.92
1735.8	-16.50	-39.91	1733.6	-15.56	-39.90	1733.5	-15.73	-39.89
1735.2	-14.74	-39.89	1736.2	-16.33	-39.89	1733.6	-15.65	-39.88
1733.8	-15.46	-39.88	1735.1	-14.85	-39.87	1735.9	-15.07	-39.86
1735.2	-15.12	-39.86	1735.3	-16.00	-39.85	1734.2	-15.34	-39.85
1734.9	-14.77	-39.80	1733.3	-18.96	-39.80	1733.5	-18.64	-39.79
1733.2	-19.06	-39.77	1733.5	-18.74	-39.75	1733.5	-18.01	-39.71
1733.4	-17.88	-39.66	1734.4	-15.94	-39.65	1734.2	-17.68	-39.64

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1733.3	-15.59	-39.64	1733.6	-15.71	-39.63	1735.7	-17.16	-39.63
1736.5	-16.11	-39.62	1736.4	-16.33	-39.62	1735.9	-16.59	-39.62
1735.8	-16.72	-39.60	1736.8	-16.19	-39.59	1735.7	-15.09	-39.58
1735.8	-15.01	-39.56	1734.9	-14.79	-39.54	1737.1	-16.06	-39.02
1736.8	-15.92	-38.96	1736.2	-15.67	-38.95	1735.8	-15.50	-38.91
1735.9	-15.41	-38.91	1735.4	-14.83	-38.87	1735.6	-15.25	-38.86
1735.4	-14.95	-38.83	1734.5	-18.77	-38.40	1733.3	-18.24	-38.39
1733.8	-18.98	-38.39	1733.9	-19.17	-38.39	1735.9	-17.20	-38.37
1736.1	-17.38	-38.36	1735.8	-16.02	-38.28	1735.5	-16.19	-38.28
1735.4	-15.75	-38.20	1735.2	-15.56	-38.18	1735.3	-15.19	-38.10
1735.4	-15.75	-38.20						
			LUNAR ORBITER PHOTOGRAPHIC SITE V 45.1					
1734.0	34.70	-43.92	1733.4	34.35	-43.91	1733.9	35.25	-43.89
1733.8	35.10	-43.88	1734.3	35.40	-43.84	1734.7	35.67	-43.82
1734.9	36.43	-43.77	1734.4	36.02	-43.77	1734.4	36.77	-43.76
1734.7	38.11	-43.69	1735.3	37.85	-43.68	1735.3	37.59	-43.67
1734.2	34.43	-43.27	1734.5	34.74	-43.22	1734.6	34.92	-43.18
1734.3	34.64	-43.18	1734.9	35.81	-43.15	1735.1	36.01	-43.14
1734.4	35.39	-43.11	1734.7	35.19	-43.11	1734.6	35.46	-43.05
1735.1	37.83	-43.01	1735.1	37.48	-42.99	1735.0	36.60	-42.96
1736.9	37.13	-42.90	1733.6	34.55	-42.57	1734.8	35.82	-42.47
1734.3	34.69	-42.45	1734.8	35.08	-42.44	1735.1	35.98	-42.42
1734.6	35.45	-42.39	1734.8	36.42	-42.37	1734.8	36.59	-42.33
1735.5	37.61	-42.31	1735.8	37.34	-42.28	1735.4	37.13	-42.28
1734.8	36.76	-42.27	1733.6	34.03	-42.21	1735.9	37.90	-42.12
1733.7	34.42	-42.08	1733.8	34.59	-42.05	1734.5	35.19	-42.04
1734.9	35.73	-42.01	1734.4	35.02	-42.00	1734.5	34.68	-42.00
1734.9	35.57	-41.99	1734.3	35.26	-41.98	1734.4	34.86	-41.98
1734.5	35.69	-41.92	1735.1	35.88	-41.90	1734.9	35.38	-41.90
1735.1	35.99	-41.87	1735.4	37.12	-41.87	1735.2	36.86	-41.84
1735.1	36.40	-41.83	1735.3	36.60	-41.81	1735.2	36.46	-41.79
1734.2	34.06	-41.71	1735.9	37.36	-41.70	1735.3	37.08	-41.68
1734.1	34.31	-41.67	1737.4	37.70	-41.66	1734.6	34.64	-41.62
1734.1	34.36	-41.59	1734.4	34.93	-41.58	1734.6	35.31	-41.54
1734.5	35.07	-41.54	1735.2	35.73	-41.52	1734.9	33.81	-41.52
1734.7	34.17	-41.49	1735.4	35.87	-41.48	1735.2	34.09	-41.48
1735.7	36.03	-41.48	1736.0	36.58	-41.42	1736.0	36.39	-41.42
1734.6	34.72	-41.41	1734.5	34.38	-41.40	1735.6	36.91	-41.39
1734.6	34.93	-41.37	1735.5	36.74	-41.37	1737.7	37.05	-41.36
1734.6	35.28	-41.36	1734.7	35.11	-41.35	1739.7	37.80	-41.29
1735.6	36.36	-41.25	1736.3	35.66	-41.23	1739.3	37.57	-41.22
1735.0	35.98	-41.16	1735.2	36.74	-41.15	1733.8	33.79	-41.11
1735.4	36.93	-41.10	1734.1	34.09	-41.08	1735.7	37.31	-41.05
1735.9	37.02	-41.03	1734.5	34.54	-41.02	1735.7	37.94	-40.98
1736.4	37.79	-40.96	1734.4	34.84	-40.93	1734.8	35.64	-40.92
1734.6	35.34	-40.85	1734.6	35.47	-40.85	1734.6	36.03	-40.84
1734.4	36.20	-40.79	1735.5	36.39	-40.75	1735.2	36.94	-40.75
1734.3	35.86	-40.74	1736.6	36.61	-40.72	1736.5	36.69	-40.66
1734.7	34.11	-40.65	1734.6	33.80	-40.61	1735.8	36.77	-40.60
1736.4	37.97	-40.59	1736.7	37.67	-40.56	1736.7	37.49	-40.54
1737.7	37.77	-40.52	1735.1	34.95	-40.51	1735.2	34.62	-40.50
1735.3	35.40	-40.42	1735.3	35.76	-40.41	1735.4	35.61	-40.34
1735.6	36.32	-40.30	1735.6	36.27	-40.30	1735.7	36.91	-40.22
1735.7	36.60	-40.18	1736.9	37.28	-40.15	1736.4	37.57	-40.06
1736.5	37.66	-40.06	1736.4	34.84	-39.88	1735.3	34.39	-39.87
1734.2	33.80	-39.87	1734.3	34.18	-39.83	1736.5	34.87	-39.82
1735.4	35.37	-39.81	1735.4	35.56	-39.78	1735.9	35.86	-39.78
1735.3	35.97	-39.75	1733.8	33.96	-39.74	1735.6	35.67	-39.73
1734.6	34.29	-39.68	1736.8	36.24	-39.60	1735.9	36.57	-39.56
1736.2	34.67	-39.55	1735.8	36.80	-39.54	1735.9	36.71	-39.52
1736.4	36.97	-39.50	1737.6	37.55	-39.49	1736.1	34.70	-39.48
1735.4	34.61	-39.48	1737.3	37.40	-39.47	1735.5	33.86	-39.45
1736.9	34.74	-39.45	1735.6	33.91	-39.37	1736.6	34.68	-39.35
1736.6	34.68	-39.32	1735.0	34.03	-39.31	1736.2	34.42	-39.27
1736.5	34.64	-39.27	1735.3	34.90	-39.26	1734.7	34.29	-39.25
1737.2	35.88	-39.16	1735.8	35.50	-39.14	1736.0	35.74	-39.07
1735.6	36.33	-39.05	1735.8	36.11	-39.01	1735.7	36.18	-38.99
1736.1	36.55	-38.94	1735.6	36.30	-38.93	1736.2	36.74	-38.83
1738.2	37.59	-38.78	1738.2	37.29	-38.78			
			LUNAR ORBITER PHOTOGRAPHIC SITE V 46					
1736.5	25.21	-45.43	1736.1	25.53	-45.37	1736.0	25.41	-45.36
1735.0	26.58	-45.34	1734.9	26.08	-45.32	1735.1	27.16	-45.28
1735.3	27.50	-45.24	1735.0	26.95	-45.24	1735.2	27.39	-45.20
1734.9	27.92	-45.20	1734.9	28.12	-45.19	1735.0	28.24	-45.14
1735.3	28.47	-45.13	1735.5	28.58	-45.09	1735.7	28.71	-45.08
1736.4	29.49	-45.02	1735.7	24.86	-44.96	1735.0	25.84	-44.95
1735.8	25.14	-44.94	1735.8	25.35	-44.93	1736.1	25.53	-44.93
1735.3	27.05	-44.80	1735.2	27.68	-44.77	1735.2	26.75	-44.75
1735.5	27.49	-44.74	1735.6	27.22	-44.71	1735.6	28.62	-44.64
1735.8	28.37	-44.64	1735.9	28.32	-44.63	1735.7	28.10	-44.60
1736.4	29.38	-44.58	1736.0	29.13	-44.56	1736.4	24.83	-44.47
1735.1	25.95	-44.46	1736.5	25.18	-44.46	1736.6	25.48	-44.42
1735.2	26.15	-44.39	1735.2	25.74	-44.36	1735.5	26.39	-44.32
1735.4	26.61	-44.31	1736.5	27.55	-44.31	1735.5	27.15	-44.28
1735.4	26.80	-44.25	1735.6	27.01	-44.24	1735.7	25.10	-44.23
1735.3	27.64	-44.21	1735.3	24.86	-44.17	1734.2	28.00	-44.16

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.6	27.90	-44.15	1735.6	28.09	-44.15	1735.9	28.50	-44.13
1735.0	25.69	-44.13	1736.3	25.36	-44.13	1736.2	25.28	-44.11
1735.7	28.39	-44.10	1736.2	25.54	-44.10	1735.3	25.87	-44.10
1736.0	28.69	-44.10	1736.2	25.46	-44.09	1735.7	28.74	-44.09
1735.9	28.64	-44.09	1735.3	26.24	-44.08	1736.9	29.41	-44.05
1735.9	28.95	-44.04	1735.7	26.49	-44.04	1735.4	26.67	-44.01
1736.5	29.47	-44.00	1735.6	27.24	-43.98	1735.5	27.09	-43.96
1735.3	26.65	-43.95	1735.8	27.43	-43.94	1736.9	29.58	-43.93
1737.5	29.78	-43.91	1736.8	25.16	-43.89	1735.5	27.62	-43.88
1736.8	27.85	-43.88	1736.2	25.46	-43.86	1735.9	28.35	-43.86
1735.6	28.07	-43.84	1735.3	25.72	-43.83	1736.2	24.99	-43.82
1736.1	28.81	-43.81	1736.3	29.02	-43.79	1736.0	28.70	-43.76
1735.4	26.60	-43.75	1735.5	24.78	-43.75	1734.9	25.59	-43.74
1735.5	26.01	-43.73	1736.6	29.14	-43.72	1735.6	24.86	-43.72
1735.0	25.76	-43.71	1736.8	29.42	-43.69	1735.4	26.14	-43.69
1736.7	29.29	-43.69	1735.7	26.39	-43.68	1735.5	27.48	-43.65
1735.8	26.99	-43.63	1736.0	25.44	-43.63	1735.8	27.16	-43.63
1737.0	29.71	-43.63	1735.2	26.17	-43.63	1735.7	27.89	-43.62
1735.5	26.85	-43.61	1735.3	25.69	-43.57	1736.1	27.37	-43.56
1735.4	26.35	-43.51	1735.9	28.70	-43.51	1735.3	26.54	-43.50
1735.6	27.04	-43.50	1735.4	26.76	-43.48	1736.2	29.50	-43.46
1736.3	24.88	-43.45	1736.0	28.08	-43.43	1735.7	26.92	-43.42
1736.8	29.17	-43.42	1735.9	28.33	-43.40	1736.2	27.19	-43.40
1736.1	27.45	-43.38	1736.4	25.35	-43.38	1736.3	29.61	-43.37
1736.4	25.15	-43.36	1735.6	28.70	-43.35	1735.3	25.49	-43.35
1736.0	28.48	-43.34	1735.4	25.93	-43.34	1737.0	25.08	-43.34
1736.4	29.28	-43.32	1736.8	29.25	-43.32	1735.3	25.63	-43.30
1735.4	25.73	-43.30	1736.2	28.86	-43.29	1736.2	26.18	-43.26
1736.0	28.21	-43.25	1735.8	29.68	-43.25	1736.6	29.44	-43.23
1736.6	28.96	-43.21	1736.2	28.64	-43.21	1736.4	26.00	-43.20
1736.3	26.19	-43.20	1736.8	29.32	-43.18	1736.5	29.23	-43.18
1735.8	26.71	-43.18	1735.9	26.51	-43.16	1735.9	27.07	-43.14
1736.0	27.37	-43.14	1736.6	27.14	-43.11	1735.8	27.06	-43.10
1735.8	24.95	-43.08	1736.7	29.65	-43.07	1736.9	29.53	-43.07
1736.0	24.75	-43.06	1736.5	25.05	-43.06	1736.9	25.29	-43.03
1735.8	27.43	-43.02	1735.8	27.68	-42.98	1735.9	25.88	-42.97
1736.0	26.11	-42.96	1736.4	27.92	-42.94	1735.6	26.22	-42.94
1736.1	28.06	-42.90	1735.6	26.47	-42.90	1736.3	28.37	-42.90
1735.4	26.31	-42.88	1736.2	28.75	-42.87	1735.9	26.89	-42.86
1736.0	28.64	-42.84	1737.3	29.56	-42.77	1736.7	29.17	-42.77
1736.9	29.39	-42.75	1736.0	27.28	-42.75	1737.0	29.31	-42.74
1735.6	27.57	-42.74	1735.9	27.17	-42.73	1737.5	29.65	-42.71
1735.7	27.82	-42.67	1736.0	28.06	-42.64	1736.2	28.34	-42.64
1736.3	28.56	-42.59	1736.3	24.86	-42.58	1735.9	24.89	-42.58
1736.7	25.24	-42.56	1737.7	29.11	-42.54	1735.6	25.54	-42.54
1736.2	29.03	-42.49	1735.6	25.91	-42.48	1736.2	28.86	-42.46
1736.0	29.50	-42.45	1735.9	26.27	-42.45	1736.1	25.60	-42.44
1736.2	26.65	-42.44	1735.9	26.17	-42.43	1735.7	25.84	-42.43
1736.7	29.36	-42.42	1736.0	29.67	-42.39	1736.1	26.74	-42.39
1736.1	26.44	-42.36	1736.2	27.02	-42.35	1736.0	26.53	-42.33
1736.2	27.02	-42.33	1736.1	27.53	-42.28	1736.0	27.25	-42.28
1736.4	27.76	-42.27	1736.5	28.27	-42.25	1736.5	28.04	-42.24
1736.3	28.65	-42.16	1736.0	28.40	-42.13	1736.2	24.77	-42.09
1736.7	29.17	-42.09	1736.6	29.05	-42.07	1736.4	24.97	-42.06
1736.8	29.26	-42.03	1736.4	29.41	-41.98	1736.7	26.68	-41.88
1736.1	26.02	-41.87	1736.4	27.20	-41.83	1736.1	26.40	-41.83
1736.3	27.13	-41.79	1736.4	27.16	-41.65	1736.4	27.73	-41.63
1736.7	28.27	-41.55	1736.6	28.13	-41.52	1736.6	28.60	-41.49
1737.0	28.43	-41.44	1737.0	29.01	-41.40	1736.4	29.36	-41.35
1737.0	29.21	-41.32	1737.3	29.54	-41.27			

LUNAR ORBITER PHOTOGRAPHIC SITE V 48

1735.2	21.63	-49.23	1736.5	22.60	-49.20	1736.5	22.75	-49.19
1736.3	22.15	-49.19	1736.5	22.33	-49.16	1738.1	23.18	-49.16
1739.4	23.30	-49.13	1739.0	23.78	-49.10	1739.0	23.91	-49.02
1738.8	24.01	-48.98	1732.9	21.71	-48.96	1738.2	21.31	-48.95
1736.4	22.33	-48.94	1737.7	24.58	-48.92	1737.0	24.97	-48.88
1737.0	25.17	-48.87	1736.3	22.57	-48.85	1736.4	22.86	-48.82
1737.4	23.10	-48.81	1738.0	23.43	-48.79	1738.2	23.83	-48.75
1739.6	23.60	-48.74	1737.9	23.94	-48.60	1737.1	23.78	-48.58
1737.8	24.10	-48.54	1737.1	24.48	-48.51	1738.0	24.32	-48.50
1737.0	24.72	-48.46	1736.8	24.91	-48.44	1737.0	25.07	-48.41
1735.5	21.85	-48.35	1735.6	22.00	-48.35	1735.6	22.18	-48.31
1736.2	22.51	-48.30	1736.2	22.35	-48.28	1737.6	23.30	-48.26
1735.8	22.94	-48.26	1736.0	22.71	-48.25	1737.1	23.16	-48.24
1737.7	23.59	-48.18	1737.2	23.89	-48.14	1737.1	24.35	-48.12
1736.6	24.74	-48.09	1736.8	25.31	-48.06	1736.8	25.46	-48.05
1737.5	24.28	-48.03	1737.1	24.01	-48.03	1736.7	24.45	-47.99
1736.3	24.85	-47.91	1735.7	21.17	-47.90	1735.6	21.34	-47.88
1734.8	21.63	-47.87	1736.4	25.01	-47.86	1735.5	22.00	-47.83
1735.8	22.27	-47.82	1735.7	22.54	-47.81	1736.1	22.93	-47.71
1736.2	23.25	-47.71	1733.9	23.73	-47.66	1734.2	23.89	-47.63
1735.4	21.29	-47.58	1736.5	24.51	-47.55	1734.7	21.52	-47.51
1735.2	21.76	-47.51	1736.5	24.95	-47.48	1735.1	21.95	-47.48
1737.3	25.23	-47.46	1735.1	22.03	-47.45	1735.7	22.46	-47.42
1735.7	22.28	-47.41	1739.2	25.72	-47.41	1735.8	22.86	-47.40
1733.9	23.48	-47.32	1734.2	23.91	-47.28	1736.7	24.44	-47.25
1736.4	24.66	-47.21	1734.6	21.38	-47.21	1734.4	21.55	-47.21
1736.5	24.89	-47.19	1736.7	25.11	-47.17	1735.0	21.96	-47.16

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.6	22.32	-47.15	1735.5	22.24	-47.14	1735.6	22.06	-47.13
1735.4	22.61	-47.09	1735.5	22.90	-47.06	1736.1	23.15	-47.03
1736.0	24.50	-46.90	1735.4	24.78	-46.82	1734.1	21.18	-46.81
1735.3	22.16	-46.76	1736.2	25.21	-46.76	1735.0	21.71	-46.75
1734.8	21.84	-46.72	1735.4	22.53	-46.65	1735.1	22.82	-46.62
1735.1	22.93	-46.58	1735.2	23.10	-46.56	1735.6	23.46	-46.53
1735.5	23.91	-46.52	1735.8	23.71	-46.49	1735.3	24.15	-46.46
1735.2	24.47	-46.41	1734.9	24.75	-46.38	1735.3	25.02	-46.32
1734.6	21.26	-46.22	1735.0	21.66	-46.20	1734.7	21.50	-46.19
1734.9	22.26	-46.14	1735.0	22.46	-46.13	1735.1	22.70	-46.13
1735.0	22.16	-46.10	1734.7	22.88	-46.02	1735.0	23.26	-45.98
1734.6	21.78	-45.95	1734.9	23.81	-45.94	1734.9	23.96	-45.89
1734.8	22.37	-45.87	1734.9	22.45	-45.84	1735.0	24.31	-45.83
1734.8	24.84	-45.76	1734.8	23.52	-45.70	1734.6	23.07	-45.69
1734.6	23.73	-45.62	1734.7	23.95	-45.58	1735.0	24.10	-45.58
1734.4	24.49	-45.50	1735.3	25.10	-45.42			
			LUNAR ORBITER PHOTOGRAPHIC SITE V 49					
1734.4	24.38	-51.31	1734.4	24.05	-51.30	1735.1	25.26	-51.23
1735.3	24.79	-51.23	1735.0	25.19	-51.22	1735.0	25.84	-51.21
1735.2	26.44	-51.16	1735.2	26.65	-51.14	1735.4	27.09	-51.10
1735.7	26.75	-51.09	1735.6	26.90	-51.09	1734.9	23.96	-50.77
1735.3	24.55	-50.74	1735.5	24.39	-50.70	1735.5	25.01	-50.68
1735.2	25.24	-50.68	1735.7	24.86	-50.67	1735.3	25.50	-50.66
1735.3	25.63	-50.65	1735.3	26.22	-50.62	1735.3	26.55	-50.60
1735.0	26.40	-50.60	1735.8	26.93	-50.58	1735.8	23.89	-50.33
1735.4	24.48	-50.24	1735.7	24.82	-50.21	1735.7	24.97	-50.18
1735.7	25.22	-50.18	1735.6	24.25	-50.17	1735.4	25.54	-50.17
1735.2	25.67	-50.10	1735.3	26.31	-50.06	1735.3	25.93	-50.05
1735.4	26.16	-50.02	1736.2	26.95	-50.00	1734.8	24.02	-49.99
1734.9	23.91	-49.93	1734.5	24.16	-49.91	1736.2	24.53	-49.89
1736.1	24.99	-49.88	1735.0	25.68	-49.85	1736.2	24.41	-49.85
1736.1	24.84	-49.84	1736.4	24.69	-49.84	1735.8	25.25	-49.83
1735.7	25.82	-49.83	1735.8	25.37	-49.82	1736.0	25.12	-49.79
1735.7	26.10	-49.77	1736.2	26.33	-49.74	1736.1	26.47	-49.69
1736.6	24.25	-49.67	1735.5	23.99	-49.65	1736.5	24.43	-49.63
1736.6	24.63	-49.61	1736.0	25.04	-49.59	1735.6	23.89	-49.58
1736.2	24.47	-49.54	1736.3	24.54	-49.54	1736.3	24.28	-49.53
1735.1	25.51	-49.51	1736.1	24.83	-49.49	1735.5	25.81	-49.47
1735.1	25.35	-49.46	1736.1	25.00	-49.46	1735.9	25.15	-49.46
1736.7	26.25	-49.44	1736.8	25.95	-49.42	1735.1	25.43	-49.41
1735.8	26.49	-49.41	1735.8	25.61	-49.40	1735.6	26.38	-49.38
1737.0	26.78	-49.36	1736.8	26.13	-49.35	1735.3	24.02	-49.29
1735.3	23.91	-49.26	1737.4	24.32	-49.25	1735.9	24.80	-49.16
1737.1	25.56	-49.15	1736.7	26.04	-49.15	1736.6	25.82	-49.14
1736.0	25.18	-49.12	1736.1	25.40	-49.10	1736.6	25.71	-49.08
1737.4	26.69	-49.06	1736.5	26.47	-49.04	1735.8	26.37	-49.01
1736.6	23.84	-48.91	1736.6	23.96	-48.87	1737.4	24.24	-48.82
1736.7	24.67	-48.80	1736.1	24.53	-48.80	1736.4	24.93	-48.76
1736.3	25.12	-48.76	1736.9	25.44	-48.71	1736.7	25.76	-48.65
1736.6	26.14	-48.61	1736.3	26.04	-48.60	1736.1	26.27	-48.58
1736.2	26.44	-48.56	1736.4	26.66	-48.53	1735.9	23.88	-48.49
1735.6	23.72	-48.45	1734.9	24.05	-48.42	1736.1	24.67	-48.35
1736.7	25.35	-48.30	1736.6	25.02	-48.29	1736.2	25.59	-48.20
1736.3	25.48	-48.18	1736.4	25.84	-48.14	1735.9	26.03	-48.13
1735.9	26.27	-48.11	1736.5	26.50	-48.09	1736.4	26.64	-48.06
1738.2	24.24	-47.93	1737.6	24.41	-47.88	1736.9	24.97	-47.76
1737.0	25.31	-47.75	1737.0	25.05	-47.75	1737.0	25.54	-47.72
1736.8	25.76	-47.60	1736.5	26.18	-47.59	1736.0	26.33	-47.54
1736.9	26.62	-47.53						
			LUNAR ORBITER PHOTOGRAPHIC SITE V 51					
1735.1	11.91	-57.56	1734.6	12.21	-57.55	1734.4	12.04	-57.55
1733.5	13.13	-57.54	1733.9	12.68	-57.49	1733.6	12.89	-57.46
1734.0	13.17	-57.44	1734.2	13.48	-57.42	1733.9	14.01	-57.41
1733.9	13.84	-57.39	1733.9	14.37	-57.38	1733.9	14.87	-57.33
1734.2	14.56	-57.31	1735.8	15.27	-57.28	1734.6	12.13	-57.00
1735.2	11.91	-57.00	1734.3	12.28	-57.00	1734.4	12.34	-56.99
1733.8	12.63	-56.96	1734.1	13.28	-56.94	1734.2	13.37	-56.93
1733.7	13.06	-56.91	1734.1	13.20	-56.90	1734.3	13.71	-56.87
1734.1	14.04	-56.86	1734.3	13.53	-56.84	1734.2	14.69	-56.80
1734.2	14.78	-56.76	1736.4	15.19	-56.75	1735.2	14.86	-56.75
1735.9	15.36	-56.66	1734.9	11.96	-56.62	1734.3	12.72	-56.57
1734.2	12.58	-56.57	1734.2	12.67	-56.55	1734.1	12.82	-56.53
1734.6	13.23	-56.53	1734.5	13.06	-56.53	1734.0	12.97	-56.53
1734.4	13.33	-56.45	1734.5	13.95	-56.45	1734.5	14.14	-56.44
1734.4	14.29	-56.43	1734.5	13.79	-56.42	1734.5	14.54	-56.39
1737.3	15.15	-56.29	1735.8	11.98	-56.25	1734.7	13.17	-56.18
1734.3	12.90	-56.17	1734.6	13.53	-56.15	1735.9	11.79	-56.13
1735.4	12.22	-56.13	1735.1	13.31	-56.13	1734.3	12.73	-56.10
1735.3	12.01	-56.08	1734.8	13.80	-56.08	1734.4	12.86	-56.06
1734.7	14.60	-56.04	1735.1	13.33	-56.03	1734.6	14.13	-56.02
1734.8	14.51	-56.01	1734.9	13.03	-55.98	1737.0	15.22	-55.98
1735.3	13.98	-55.95	1734.7	13.86	-55.93	1734.6	14.35	-55.92
1734.6	14.26	-55.91	1734.9	14.57	-55.88	1736.5	15.18	-55.87
1735.5	11.85	-55.80	1736.8	14.99	-55.78	1735.5	12.20	-55.75
1736.5	15.21	-55.74	1735.0	13.26	-55.69	1734.8	12.63	-55.69
1734.8	13.85	-55.59	1734.9	14.05	-55.56	1734.9	14.16	-55.55

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.7	14.59	-55.50	1737.3	15.00	-55.47	1734.9	14.32	-55.45
1734.9	14.54	-55.45	1737.3	15.03	-55.38	1735.8	11.78	-55.32
1736.1	11.91	-55.30	1735.4	12.32	-55.28	1735.6	12.15	-55.26
1734.8	12.80	-55.23	1734.9	13.01	-55.18	1735.0	13.28	-55.13
1735.0	13.56	-55.12	1734.9	13.77	-55.08	1734.9	14.07	-55.06
1735.1	14.15	-55.05	1736.8	14.87	-55.00	1736.6	14.56	-54.98
1736.5	14.78	-54.98	1736.5	14.49	-54.97	1736.5	14.70	-54.94
1736.7	15.09	-54.93	1736.3	11.74	-54.88	1735.9	12.09	-54.88
1735.7	12.03	-54.83	1734.8	12.74	-54.77	1734.7	12.92	-54.73
1735.1	13.25	-54.73	1735.0	13.40	-54.71	1734.9	13.87	-54.65
1735.1	13.99	-54.65	1735.0	13.60	-54.64	1735.2	14.35	-54.60
1735.1	14.15	-54.57						
			LUNAR ORBITER PHOTOGRAPHIC SITE I P 1					
1736.7	-1.27	40.26	1736.8	-1.00	40.34	1737.3	-1.32	40.37
1737.1	-.66	40.41	1737.1	-.79	40.41	1736.8	-.45	40.43
1737.5	-.22	40.48	1737.0	-1.03	40.50	1737.2	-.81	40.51
1736.4	-.64	40.53	1736.9	-1.02	40.55	1737.0	-.68	40.60
1736.7	-.06	40.61	1736.2	-.26	40.64	1736.6	-.51	40.64
1736.5	-1.37	40.70	1736.5	-1.05	40.70	1736.6	-.52	40.72
1736.4	-.11	40.76	1736.2	-.31	40.77	1736.4	-1.09	40.80
1736.7	-.74	40.80	1736.2	-.89	40.81	1736.8	-.73	40.85
1736.9	-1.37	40.86	1736.7	-.32	40.89	1736.5	-.54	40.91
1736.4	-.14	40.93	1736.7	-1.12	40.96	1737.0	-.92	40.98
1736.5	-.15	41.03	1737.3	-1.41	41.03	1736.3	-1.10	41.03
1736.1	-.58	41.07	1736.4	-.37	41.08	1736.8	-1.46	41.08
1736.9	-.99	41.14	1736.0	-.18	41.16	1736.8	-1.15	41.16
1737.1	-.76	41.19	1736.4	-1.46	41.21	1736.7	-.94	41.21
1736.6	-.62	41.22	1736.7	-.23	41.23	1736.2	-.40	41.24
1736.8	-1.13	41.25	1736.9	-.65	41.25	1736.9	-1.01	41.25
1736.8	-1.50	41.27	1735.4	-.89	41.29	1736.9	-.76	41.29
1736.8	-.98	41.29	1736.8	-.98	41.30	1737.1	-.24	41.31
1736.7	-.40	41.34	1736.6	-.83	41.38	1736.2	-1.17	41.41
1736.4	-.67	41.42	1736.4	-1.53	41.42	1736.6	-1.03	41.44
1736.4	-.92	41.46	1736.5	-.44	41.47	1736.1	-1.55	41.48
1736.1	-1.16	41.52	1736.4	-.71	41.52	1736.5	-.27	41.53
1736.6	-.29	41.53	1736.4	-.82	41.54	1736.1	-1.08	41.56
1736.1	-1.56	41.57	1736.3	-1.22	41.58	1736.3	-.96	41.62
1736.5	-.31	41.63	1736.7	-.51	41.66	1736.0	-1.58	41.68
1736.6	-.28	41.69	1736.3	-.89	41.72	1736.4	-.75	41.72
1735.7	-1.59	41.72	1736.0	-1.22	41.76	1735.7	-1.62	41.80
1736.3	-.31	41.80	1736.1	-1.01	41.81	1736.3	-.51	41.84
1736.3	-.91	41.89	1736.5	-.33	41.92	1735.7	-1.16	41.92
1735.8	-1.66	41.93	1735.9	-.77	41.93	1735.7	-1.29	41.95
1736.4	-.30	42.00	1736.0	-.53	42.00	1735.8	-1.02	42.02
1736.3	-.37	42.02	1735.7	-1.28	42.09	1735.9	-1.65	42.10
1736.0	-.94	42.11	1735.8	-1.16	42.13	1736.0	-1.31	42.16
1736.0	-.60	42.16	1735.9	-.80	42.16	1736.0	-1.11	42.20
1735.9	-1.72	42.22	1736.2	-.99	42.23	1736.0	-1.20	42.24
1736.0	-.36	42.24	1736.1	-1.35	42.26	1735.9	-.86	42.30
1737.1	-1.13	42.31	1736.3	-.41	42.33	1736.0	-1.23	42.33
1735.9	-.64	42.37	1735.9	-1.73	42.43	1736.0	-1.39	42.44
1736.0	-.92	42.44	1736.0	-.65	42.45	1736.0	-1.27	42.46
1736.0	-1.06	42.47	1736.0	-.40	42.50	1736.1	-1.04	42.53
1736.0	-1.15	42.55	1736.1	-.93	42.59	1735.8	-1.85	42.61
1736.0	-1.19	42.64	1736.0	-1.44	42.65	1736.1	-.44	42.65
1736.1	-.69	42.67	1735.8	-1.12	42.69	1735.8	-1.32	42.71
1735.9	-.95	42.73	1735.9	-1.86	42.75	1736.0	-1.45	42.77
1736.1	-1.23	42.78	1735.9	-1.34	42.79	1735.9	-.74	42.85
1736.2	-1.87	42.86	1735.6	-1.34	42.88	1735.9	-.48	42.91
1735.6	-1.33	42.92	1736.0	-1.01	42.92	1735.9	-.74	42.93
1735.7	-1.50	42.97	1735.8	-1.26	42.99	1735.8	-1.17	43.02
1736.2	-1.91	43.03	1736.1	-.53	43.04	1735.8	-1.05	43.06
1735.2	-1.53	43.07	1734.9	-1.40	43.10	1735.1	-1.18	43.11
1734.8	-1.97	43.16	1735.9	-.54	43.17	1734.9	-1.31	43.18
1735.1	-1.05	43.19	1734.0	-1.43	43.24	1734.8	-1.56	43.25
1736.4	-.56	43.29	1733.1	-2.02	43.29	1734.6	-1.35	43.29
1733.8	-1.23	43.30	1734.6	-1.08	43.33	1735.0	-.80	43.33
1734.3	-.84	43.38	1733.7	-1.61	43.41	1732.7	-1.48	43.44
1732.6	-1.37	43.49	1732.4	-1.27	43.49	1733.1	-1.12	43.54
1732.8	-.85	43.54	1732.4	-.56	43.67			
			LUNAR ORBITER PHOTOGRAPHIC SITE I P 3					
1735.9	.11	24.50	1736.6	-.05	24.51	1735.8	.30	24.56
1735.8	.52	24.57	1736.7	-.04	24.58	1735.7	.28	24.62
1735.9	.55	24.64	1735.7	.63	24.66	1735.3	-.09	24.68
1735.9	.86	24.70	1735.7	.64	24.72	1736.5	1.02	24.74
1735.9	.50	24.75	1735.7	.28	24.75	1736.0	1.20	24.76
1735.6	.61	24.77	1735.9	-.09	24.77	1735.8	.53	24.78
1735.6	.06	24.80	1735.7	1.06	24.82	1735.7	.24	24.83
1735.6	.45	24.87	1735.3	.53	24.87	1735.6	.06	24.87
1735.6	.62	24.87	1735.9	.85	24.87	1735.7	1.22	24.88
1735.7	.04	24.90	1735.7	.64	24.92	1735.6	.59	24.92
1736.0	.81	24.92	1735.8	.48	24.93	1735.8	-.14	24.95
1735.6	.20	24.96	1735.6	.50	24.97	1735.9	.80	25.01
1735.8	1.17	25.01	1735.6	.21	25.02	1735.7	-.00	25.02
1735.7	.97	25.03	1735.8	.44	25.03	1735.8	.61	25.04
1735.7	.50	25.07	1736.0	.77	25.10	1735.7	.95	25.10

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.7	.15	25.10	1735.6	-.00	25.12	1735.8	.61	25.13
1735.7	.48	25.13	1735.8	.43	25.13	1735.7	1.19	25.14
1735.8	.77	25.14	1735.8	.56	25.15	1735.8	-.20	25.18
1735.6	.18	25.19	1735.7	.44	25.20	1735.7	-.04	25.20
1735.7	.53	25.23	1735.8	.74	25.24	1735.8	.91	25.28
1735.7	-.23	25.28	1735.8	1.10	25.28	1735.6	-.07	25.30
1735.8	.52	25.32	1735.8	.70	25.34	1735.6	.14	25.35
1735.7	.46	25.35	1735.6	-.08	25.36	1735.6	-.27	25.40
1735.7	.44	25.40	1735.7	.36	25.41	1735.6	.10	25.42
1735.7	.91	25.44	1735.7	.69	25.44	1735.6	-.07	25.46
1735.8	.51	25.46	1735.6	-.27	25.47	1735.5	1.08	25.48
1735.7	.72	25.50	1735.7	.42	25.51	1735.7	.47	25.53
1735.6	-.29	25.55	1735.7	.10	25.55	1735.6	.85	25.55
1735.5	1.06	25.56	1735.7	.34	25.56	1735.7	.68	25.57
1735.7	.42	25.59	1735.6	.86	25.61	1735.7	.26	25.62
1735.6	1.05	25.63	1735.6	.05	25.64	1735.6	-.31	25.65
1735.6	.66	25.66	1735.6	.40	25.68	1735.5	1.03	25.68
1735.6	-.12	25.72	1735.6	.25	25.72	1735.6	.62	25.73
1735.6	.26	25.75	1735.6	.03	25.77	1735.6	.81	25.78
1735.5	.99	25.79	1735.6	-.13	25.80	1735.6	.64	25.80
1735.6	.39	25.81	1735.6	.31	25.82	1735.5	.32	25.86
1735.5	.81	25.86	1735.6	.03	25.87	1735.5	.99	25.88
1735.5	.63	25.90	1735.5	-.16	25.92	1735.6	.25	25.92
1735.5	.96	25.96	1735.5	.57	25.97	1735.6	.77	25.97
1735.6	.31	25.98	1735.6	.03	25.98	1735.5	.18	25.99
1735.6	.75	26.03	1735.3	-.42	26.05	1736.7	.32	26.05
1735.4	.96	26.06	1735.6	.60	26.06	1735.5	.17	26.07
1735.5	-.18	26.09	1735.3	.26	26.09	1735.6	.73	26.11
1735.6	.53	26.11	1735.7	.92	26.12	1735.4	-.44	26.13
1735.5	-.05	26.14	1735.6	.36	26.14	1735.6	.56	26.18
1735.6	.74	26.18	1735.5	.14	26.18	1735.5	.24	26.18
1735.5	-.20	26.19	1735.6	.51	26.21	1735.5	-.06	26.22
1735.5	.21	26.26	1735.6	.34	26.26	1735.6	-.47	26.27
1735.6	-.21	26.27	1735.6	-.07	26.30	1735.9	.72	26.30
1735.6	.87	26.30	1735.6	.50	26.32	1735.7	.13	26.32
1735.6	-.45	26.33	1735.7	-.11	26.35	1735.7	.22	26.37
1735.8	.27	26.38	1735.7	.49	26.41	1735.5	-.11	26.41
1735.8	.13	26.42	1735.7	.68	26.42	1735.8	.22	26.44
1735.7	.84	26.45	1735.7	.23	26.46	1735.7	-.29	26.46
1735.7	.45	26.47	1735.7	.16	26.49	1735.7	.24	26.50
1735.7	.08	26.50	1735.7	.64	26.51	1735.7	.16	26.52
1735.7	-.14	26.53	1735.7	.83	26.54	1735.7	.47	26.57
1735.6	.10	26.58	1735.8	.64	26.60	1735.7	-.53	26.63
1735.7	-.18	26.66	1735.6	.15	26.68	1735.7	.79	26.68
1735.9	-.52	26.71	1735.7	.14	26.71	1735.8	.21	26.72
1735.8	-.36	26.74	1735.7	.61	26.74	1735.8	.41	26.76
1735.7	.03	26.79	1735.9	-.55	26.81	1735.6	.77	26.82
1735.6	.17	26.83	1735.8	.12	26.84	1735.7	-.22	26.86
1735.7	.56	26.86	1735.8	.03	26.87	1735.8	.38	26.89
1735.8	-.40	26.90	1735.6	.74	26.92	1735.7	.05	26.94
1736.0	-.23	26.94	1735.7	.56	26.95	1735.6	.17	26.96
1735.7	-.03	26.98	1735.7	.34	27.01	1735.6	.07	27.03
1735.6	.73	27.03	1735.6	.54	27.05	1735.6	-.26	27.06
1735.6	.14	27.07	1735.9	-.44	27.09	1735.6	.32	27.12
1735.6	-.04	27.12	1735.6	-.27	27.14	1735.5	.70	27.16
1735.6	-.45	27.17	1735.5	.09	27.17	1735.4	.03	27.19
1735.8	-.48	27.19	1735.6	-.08	27.20	1735.5	-.29	27.20
1735.4	.50	27.22	1735.8	-.65	27.24	1735.4	.30	27.25
1735.6	-.47	27.27	1735.5	.07	27.28	1735.4	-.31	27.29
1735.8	-.66	27.31	1735.5	-.10	27.34	1735.3	.00	27.34
1735.3	.48	27.34	1735.3	-.32	27.35	1735.5	.64	27.38
1735.4	-.14	27.40	1735.4	.04	27.41	1735.3	.27	27.42
1735.7	-.70	27.43	1735.5	-.52	27.44	1735.4	-.05	27.44
1735.3	-.34	27.46	1735.2	.61	27.51	1735.5	-.12	27.51
1735.7	-.72	27.51	1735.0	-.05	27.52	1735.3	-.55	27.53
1735.4	.05	27.53	1735.4	.24	27.53	1735.1	-.09	27.58
1734.9	-.56	27.59	1734.8	-.38	27.60	1732.5	.46	27.60
1735.6	-.14	27.61	1735.1	-.75	27.62	1735.0	.60	27.62
1735.2	.21	27.63	1735.1	-.02	27.64	1734.6	-.06	27.65
1734.9	-.16	27.68	1734.7	-.41	27.70	1734.9	.39	27.72
1734.9	.57	27.75	1735.1	-.22	27.76	1734.7	.20	27.79
1733.9	-.05	27.79	1734.6	.35	27.82			

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1736.9	.29	11.51	1736.8	.25	11.54	1736.9	.07	11.56
1736.9	.52	11.56	1737.2	.66	11.57	1737.0	.48	11.58
1736.9	.31	11.59	1736.7	.33	11.60	1737.0	.46	11.64
1737.1	.62	11.65	1736.8	.41	11.65	1737.4	.81	11.66
1736.6	.22	11.69	1736.9	.04	11.71	1737.7	.99	11.72
1737.5	.76	11.73	1736.6	.36	11.74	1737.0	.60	11.76
1736.8	.50	11.76	1736.7	.25	11.77	1736.5	-.28	11.78
1737.1	.42	11.78	1737.2	.45	11.79	1737.0	.39	11.80
1736.7	.32	11.82	1736.8	-.00	11.83	1736.6	-.13	11.83
1736.8	.27	11.87	1736.4	-.30	11.87	1736.7	.25	11.87
1737.0	.74	11.89	1736.6	.55	11.89	1736.4	.17	11.89
1736.7	.58	11.91	1736.7	.29	11.92	1736.7	.56	11.95
1736.6	.53	11.95	1737.3	.79	11.95	1737.0	.73	11.97
1737.0	.22	12.00	1736.3	.48	12.02	1736.4	.15	12.03
1736.3	.31	12.05	1736.9	.71	12.05	1736.4	.39	12.08

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.5	.95	12.10	1737.1	-.20	12.11	1736.4	.55	12.12
1736.4	1.00	12.15	1736.5	.94	12.17	1737.2	-.03	12.18
1736.4	.98	12.19	1737.3	.13	12.20	1737.2	.24	12.22
1737.1	.34	12.23	1737.2	-.34	12.23	1736.7	.89	12.24
1737.2	.50	12.26	1736.9	.16	12.31	1737.1	.21	12.33
1737.2	.33	12.37	1737.1	.09	12.39	1737.3	.39	12.40
1737.1	-.09	12.43	1737.1	.48	12.44	1737.0	.86	12.44
1737.3	-.39	12.47	1737.3	.14	12.49	1737.3	.91	12.51
1737.1	.65	12.53	1737.3	.33	12.54	1737.1	.23	12.54
1737.3	-.14	12.56	1737.1	.83	12.61	1737.0	.04	12.62
1737.1	-.19	12.69	1737.1	.88	12.69	1737.2	.60	12.70
1737.2	.40	12.72	1737.2	.17	12.74	1737.0	.25	12.75
1737.3	.04	12.76	1737.3	-.11	12.77	1737.3	-.42	12.78
1737.1	.31	12.79	1737.1	.78	12.81	1737.1	.85	12.83
1737.2	.58	12.84	1737.0	.23	12.90	1737.3	.01	12.92
1737.2	-.22	12.92	1736.9	.81	12.92	1737.1	.38	12.92
1737.1	.12	12.99	1737.1	.54	13.01	1737.4	-.40	13.05
1737.0	.21	13.06	1737.2	.84	13.06	1737.1	.77	13.07
1737.1	.06	13.10	1737.1	.24	13.10	1737.3	-.06	13.10
1737.1	.53	13.11	1737.2	-.26	13.12	1737.1	.33	13.14
1737.2	-.48	13.14	1737.1	.17	13.17	1737.0	.73	13.18
1737.2	.81	13.20	1736.9	-.07	13.20	1736.8	-.18	13.20
1737.0	-.25	13.26	1737.2	.22	13.26	1737.0	.49	13.32
1737.2	-.54	13.33	1736.9	.74	13.33	1736.9	-.50	13.35
1737.0	-.01	13.35	1737.0	.12	13.36	1736.9	.44	13.37
1737.2	-.22	13.38	1737.0	.27	13.40	1737.0	.17	13.42
1736.9	.24	13.43	1737.1	-.58	13.46	1737.0	.13	13.48
1737.1	.66	13.48	1737.4	-.32	13.49	1737.5	-.15	13.52
1737.2	-.53	13.56	1737.5	.41	13.57	1736.9	-.07	13.59
1737.4	.22	13.63	1737.5	.68	13.63	1737.4	-.50	13.67
1737.3	-.62	13.68	1737.5	-.08	13.73	1737.4	-.35	13.74
1737.7	.59	13.75	1737.1	.35	13.78	1737.4	-.55	13.79
1737.3	.02	13.79	1737.1	.17	13.84	1737.3	-.11	13.87
1737.5	.63	13.89	1737.0	-.21	13.90	1737.0	-.66	13.94
1737.1	-.00	13.98	1737.2	.31	13.98	1736.9	-.58	13.98
1736.9	-.45	13.99	1737.3	.16	14.00	1737.0	-.68	14.02
1737.1	-.13	14.03	1737.1	.46	14.04	1736.9	-.34	14.05
1736.8	-.44	14.08	1737.1	-.59	14.11	1737.3	-.01	14.13
1736.8	-.25	14.13	1737.2	.60	14.13	1736.8	-.68	14.15
1737.0	-.49	14.15	1737.3	.24	14.15	1737.4	.53	14.16
1737.4	.15	14.21	1736.8	-.17	14.24	1737.0	-.70	14.25
1736.7	-.45	14.26	1736.8	-.29	14.27	1737.0	-.01	14.27
1737.1	-.42	14.30	1737.2	.58	14.30	1737.3	.25	14.30
1737.1	.08	14.31	1737.4	.46	14.32	1737.1	-.15	14.34
1737.2	-.52	14.36	1737.4	.14	14.40	1737.3	.22	14.40
1737.3	-.32	14.41	1737.4	-.69	14.44	1737.2	-.56	14.45
1737.4	-.33	14.46	1737.8	-.23	14.47	1738.0	.07	14.47
1737.2	-.47	14.47	1737.4	.41	14.48	1737.4	-.79	14.48
1738.0	-.09	14.49	1738.1	.04	14.52	1737.2	-.57	14.54
1737.4	-.81	14.54	1738.5	-.25	14.55	1737.7	.39	14.58
1737.2	-.45	14.58	1738.3	-.24	14.63	1737.8	-.39	14.64
1737.3	-.58	14.64	1737.4	-.47	14.66	1737.7	.00	14.66
1737.5	-.82	14.66	1737.6	-.11	14.68	1737.6	.38	14.71
1737.7	-.13	14.71	1737.8	-.39	14.72	1737.5	-.81	14.73
1737.5	-.48	14.73	1737.9	-.26	14.73	1737.3	-.62	14.73
1737.9	.36	14.73	1737.7	-.00	14.74	1737.7	.01	14.76
1737.6	-.31	14.77	1737.8	-.86	14.78	1737.5	-.61	14.81
1737.7	-.12	14.82	1737.7	.35	14.84	1737.5	-.31	14.84
1738.4	-.84	14.85	1738.2	-.66	14.85	1738.2	-.67	14.86
1737.1	-.42	14.89	1737.7	.35	14.90	1738.1	-.68	14.92
1737.5	-.03	14.92	1737.5	-.46	14.92	1737.6	.32	14.94
1737.7	-.43	14.94	1738.3	-.88	14.95	1737.7	-.55	14.95
1737.4	-.33	14.96	1737.7	-.16	14.97	1737.5	-.46	14.97
1738.1	-.69	15.00	1737.6	-.57	15.00	1737.5	.34	15.01
1737.5	-.49	15.02	1737.4	-.35	15.03	1737.7	.09	15.03
1738.3	-.88	15.03	1737.7	-.59	15.04	1737.6	-.18	15.04
1737.4	-.34	15.05	1738.1	-.92	15.05	1737.4	.32	15.05
1737.9	-.07	15.06	1737.7	-.56	15.08	1737.3	-.38	15.08
1737.7	-.19	15.08	1738.4	-.89	15.09	1737.9	-.09	15.10
1737.5	-.37	15.10	1737.7	-.59	15.10	1737.8	.29	15.11
1737.4	-.47	15.12	1737.6	-.36	15.13	1737.3	-.50	15.14
1738.1	.28	15.16	1737.5	-.40	15.17	1738.0	-.61	15.18
1738.1	-.61	15.21	1737.5	-.40	15.21	1737.5	-.51	15.21
1737.6	.07	15.22	1737.4	-.11	15.22	1737.6	-.24	15.22
1738.3	-.61	15.25	1738.3	.28	15.25	1737.5	-.43	15.27
1737.7	-.23	15.28	1738.2	-.60	15.28	1737.7	-.26	15.28
1737.6	-.22	15.29	1737.7	.04	15.30	1738.1	.25	15.33
1738.0	-.56	15.35	1738.0	.24	15.35	1737.6	-.15	15.36
1737.7	-.01	15.37	1734.8	-.89	15.37	1737.6	-.47	15.38
1737.6	-.15	15.39	1734.8	-.90	15.40	1734.8	-.78	15.40
1734.8	-.82	15.40	1737.8	.02	15.41	1737.5	.24	15.46
1737.6	-.03	15.48	1737.4	.22	15.52	1737.5	-.02	15.55
1737.5	.19	15.55						

APPENDIX

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RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.3	-.15	-2.90	1736.9	.06	-2.83	1736.0	.29	-2.79
1735.9	.34	-2.77	1737.0	-.37	-2.77	1735.9	.27	-2.76
1736.5	-.18	-2.73	1736.7	.04	-2.73	1735.9	.38	-2.72
1736.6	.57	-2.72	1736.6	.04	-2.67	1736.2	.29	-2.66
1736.1	.23	-2.65	1736.2	-.39	-2.65	1736.7	.77	-2.63
1736.6	.02	-2.62	1736.4	.37	-2.61	1736.5	.58	-2.60
1736.3	.30	-2.60	1736.4	-.01	-2.59	1736.4	-.21	-2.59
1736.2	.22	-2.57	1736.4	.53	-2.56	1736.5	.55	-2.55
1736.4	.33	-2.54	1736.3	-.00	-2.54	1736.3	-.24	-2.54
1736.5	-.38	-2.51	1736.3	.20	-2.51	1736.5	-.23	-2.50
1736.3	.72	-2.49	1736.5	-.42	-2.46	1735.9	.54	-2.46
1736.1	.50	-2.44	1736.4	.23	-2.44	1736.5	-.02	-2.44
1736.3	.33	-2.43	1736.4	.20	-2.42	1736.2	.87	-2.40
1736.2	.51	-2.39	1736.4	-.27	-2.39	1736.5	-.42	-2.38
1736.3	.68	-2.38	1736.4	.29	-2.37	1736.2	.86	-2.35
1736.5	-.28	-2.34	1736.9	-.05	-2.34	1736.3	.17	-2.30
1736.2	.86	-2.29	1736.2	.68	-2.29	1736.3	-.07	-2.27
1736.3	.21	-2.27	1736.4	-.05	-2.27	1736.3	.16	-2.27
1736.2	.66	-2.27	1736.5	-.46	-2.26	1736.1	.66	-2.24
1736.2	.15	-2.23	1736.3	.27	-2.21	1736.3	.21	-2.20
1736.4	-.32	-2.20	1736.2	-.08	-2.20	1736.2	.14	-2.17
1736.1	.47	-2.16	1736.2	.81	-2.14	1736.5	-.48	-2.13
1736.1	-.09	-2.13	1736.2	.17	-2.10	1736.3	.23	-2.10
1736.1	.64	-2.08	1736.3	.10	-2.05	1736.3	.17	-2.04
1736.1	.82	-2.04	1736.2	.46	-2.04	1736.6	-.51	-2.03
1736.3	.22	-2.02	1736.3	-.33	-2.02	1736.2	.60	-2.00
1736.6	-.51	-1.98	1736.3	-.11	-1.97	1736.2	.41	-1.93
1736.1	.77	-1.93	1736.3	.15	-1.93	1736.3	.06	-1.92
1736.4	-.37	-1.92	1736.2	-.35	-1.92	1736.3	-.32	-1.91
1736.3	.19	-1.90	1736.4	-.12	-1.88	1736.5	-.53	-1.87
1736.2	.40	-1.85	1736.2	.57	-1.84	1736.3	-.15	-1.84
1736.4	.14	-1.83	1736.4	-.12	-1.83	1736.1	.75	-1.83
1736.3	.06	-1.81	1736.3	.21	-1.81	1736.6	-.57	-1.80
1736.4	.39	-1.78	1736.4	.13	-1.77	1736.5	-.39	-1.75
1736.4	-.16	-1.75	1736.3	.54	-1.74	1736.3	.03	-1.73
1736.4	.14	-1.73	1736.1	.71	-1.71	1736.4	.16	-1.68
1736.3	.36	-1.67	1736.1	.71	-1.67	1736.4	-.16	-1.65
1736.3	.50	-1.63	1736.4	.08	-1.62	1736.4	.00	-1.61
1736.8	-.63	-1.60	1736.4	.14	-1.59	1736.7	-.45	-1.59
1736.3	.67	-1.57	1736.6	-.16	-1.52	1736.9	-.63	-1.50
1736.5	.05	-1.50	1736.3	.64	-1.50	1736.5	.45	-1.49
1736.6	.16	-1.48	1736.5	.10	-1.48	1736.9	-.47	-1.46
1736.5	-.04	-1.46	1736.8	.16	-1.40	1736.5	.66	-1.40
1736.6	.30	-1.39	1736.6	.45	-1.38	1736.9	.03	-1.37
1736.9	-.02	-1.36	1736.9	.10	-1.34	1736.9	-.23	-1.34
1736.9	-.07	-1.34	1736.9	.27	-1.32	1737.1	-.66	-1.29
1736.9	.43	-1.29	1737.0	-.53	-1.26	1736.9	-.21	-1.25
1736.9	.12	-1.23	1736.9	.03	-1.23	1736.9	-.05	-1.21
1737.1	-.67	-1.21	1736.8	.60	-1.21	1737.0	.07	-1.19
1737.0	-.11	-1.17	1737.1	-.54	-1.11	1737.0	-.27	-1.10
1737.0	-.11	-1.09	1737.0	-.03	-1.09	1736.9	.38	-1.08
1737.0	.20	-1.07	1737.0	.08	-1.06	1736.9	.54	-1.03
1737.1	-.72	-1.03	1737.1	-.00	-1.03	1737.1	.20	-1.01
1737.1	.35	-1.00	1737.0	-.53	-1.00	1737.6	.53	-.97
1737.0	-.32	-.96	1736.9	.03	-.92	1736.9	-.08	-.92
1737.0	-.76	-.91	1737.0	-.16	-.91	1736.9	-.57	-.90
1737.0	.18	-.90	1737.0	-.05	-.87	1737.0	.34	-.87
1736.8	-.35	-.86	1736.8	-.17	-.81	1736.9	.49	-.80
1736.9	-.80	-.79	1736.5	-.10	-.79	1736.8	-.08	-.78
1736.9	-.05	-.74	1736.8	-.64	-.72	1736.9	.17	-.72
1736.9	.33	-.70	1736.9	-.79	-.69	1736.8	-.22	-.69
1736.7	-.14	-.67	1736.8	-.39	-.66	1736.8	.01	-.66
1737.0	-.82	-.65	1736.8	.46	-.65	1736.7	.14	-.62
1736.8	-.08	-.62	1736.8	-.65	-.60	1736.7	.27	-.57
1736.2	-.13	-.56	1736.6	-.17	-.55	1736.8	-.83	-.55
1736.8	.43	-.54	1736.8	-.24	-.54	1736.6	-.08	-.52
1736.6	-.03	-.51	1736.7	-.69	-.51	1736.8	-.43	-.51
1736.7	-.26	-.50	1736.5	.41	-.44	1736.7	-.43	-.44
1737.3	-.84	-.41	1736.7	.10	-.40	1736.7	-.27	-.40
1736.6	.23	-.37	1736.6	-.15	-.36	1736.5	-.10	-.36
1736.4	-.03	-.35	1737.0	-.72	-.35	1736.5	-.10	-.33
1736.5	-.22	-.32	1737.0	-.28	-.30	1736.4	.07	-.29
1736.3	-.73	-.29	1736.6	-.23	-.29	1736.9	-.45	-.28
1736.4	.21	-.28	1737.1	-.86	-.27	1736.7	-.14	-.27
1736.3	.37	-.25	1736.9	.07	-.23	1736.7	-.09	-.23
1737.2	-.87	-.23	1736.8	-.49	-.21	1736.6	-.14	-.21
1736.4	-.76	-.20	1737.0	-.32	-.20	1733.8	-.24	-.19
1736.3	.35	-.17	1736.9	.04	-.15	1736.5	.17	-.14
1736.1	-.24	-.14	1736.8	-.51	-.13	1736.2	-.16	-.12
1737.3	-.35	-.12	1736.6	.16	-.10	1736.2	-.15	-.09
1736.2	-.25	-.09	1736.7	-.51	-.08	1737.2	-.34	-.08
1736.6	-.21	-.06	1736.2	.33	-.05	1736.6	.15	-.03
1736.6	-.19	-.03	1736.9	.02	-.03	1736.2	-.25	-.02
1736.7	-.30	-.02	1735.8	.30	.05			

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
			LUNAR ORBITER PHOTOGRAPHIC SITE I P 7					
1737.3	-3.59	-23.70	1737.5	-3.23	-23.66	1736.9	-3.61	-23.60
1737.8	-2.98	-23.59	1737.5	-2.85	-23.57	1737.3	-3.25	-23.51
1736.8	-3.65	-23.50	1738.3	-2.99	-23.48	1737.9	-2.57	-23.46
1736.4	-3.66	-23.45	1736.9	-2.91	-23.44	1736.2	-3.02	-23.44
1738.7	-3.27	-23.43	1738.0	-2.81	-23.43	1737.9	-2.42	-23.41
1736.7	-3.30	-23.38	1736.8	-2.92	-23.36	1737.1	-2.86	-23.35
1736.6	-3.68	-23.34	1737.0	-2.43	-23.33	1737.2	-2.63	-23.30
1736.8	-3.03	-23.30	1736.5	-3.70	-23.28	1736.5	-3.32	-23.25
1736.8	-3.04	-23.24	1737.0	-2.89	-23.23	1736.6	-3.06	-23.22
1736.8	-2.96	-23.20	1736.9	-2.64	-23.20	1736.9	-2.91	-23.18
1736.8	-2.48	-23.17	1736.4	-3.71	-23.16	1736.9	-2.65	-23.15
1736.6	-3.34	-23.13	1736.3	-3.73	-23.11	1736.6	-2.49	-23.09
1736.6	-2.71	-23.09	1736.6	-3.03	-23.08	1736.6	-2.95	-23.04
1736.6	-2.47	-23.03	1735.7	-3.37	-23.01	1736.6	-2.72	-23.01
1736.4	-3.77	-23.00	1736.5	-3.05	-22.96	1736.4	-3.33	-22.93
1736.5	-2.74	-22.93	1734.9	-3.08	-22.92	1736.6	-2.53	-22.90
1736.4	-3.16	-22.89	1736.3	-3.79	-22.88	1736.5	-2.74	-22.85
1736.4	-3.01	-22.85	1736.5	-3.13	-22.84	1736.4	-3.21	-22.84
1736.4	-3.38	-22.81	1735.8	-3.83	-22.80	1736.0	-3.07	-22.79
1736.3	-2.74	-22.79	1736.3	-3.16	-22.78	1736.3	-2.55	-22.76
1736.4	-3.08	-22.76	1736.2	-3.45	-22.73	1736.4	-2.77	-22.71
1736.3	-3.24	-22.71	1736.3	-3.14	-22.69	1736.2	-3.45	-22.66
1736.1	-3.81	-22.62	1736.3	-3.09	-22.61	1736.4	-2.57	-22.61
1736.3	-2.79	-22.56	1736.2	-3.26	-22.56	1736.1	-3.45	-22.56
1736.1	-3.47	-22.50	1736.2	-3.20	-22.50	1736.1	-3.88	-22.49
1736.2	-2.60	-22.45	1736.1	-3.28	-22.43	1736.2	-2.81	-22.42
1736.3	-3.93	-22.37	1736.4	-3.52	-22.36	1736.2	-2.62	-22.36
1735.7	-3.90	-22.29	1736.2	-2.84	-22.29	1736.1	-3.53	-22.28
1736.0	-3.32	-22.28	1736.1	-3.26	-22.28	1736.1	-3.17	-22.27
1736.1	-2.89	-22.26	1736.2	-2.65	-22.25	1736.1	-3.35	-22.24
1735.8	-3.24	-22.20	1736.2	-2.86	-22.18	1736.2	-3.97	-22.18
1736.1	-2.70	-22.16	1736.7	-3.58	-22.14	1736.1	-2.89	-22.13
1736.0	-3.38	-22.11	1736.1	-2.69	-22.10	1735.7	-3.36	-22.09
1736.1	-2.94	-22.08	1735.1	-3.32	-22.03	1737.3	-2.94	-22.02
1736.0	-3.29	-22.00	1735.8	-2.66	-22.00	1736.1	-3.62	-22.00
1736.0	-2.91	-21.97	1736.0	-2.90	-21.95	1736.1	-2.68	-21.94
1735.9	-3.39	-21.94	1736.0	-3.60	-21.93	1736.1	-2.97	-21.90
1736.0	-3.36	-21.89	1736.2	-4.03	-21.86	1736.0	-2.71	-21.86
1735.9	-3.30	-21.85	1736.2	-2.98	-21.85	1736.0	-2.72	-21.83
1736.0	-2.73	-21.80	1736.1	-3.66	-21.80	1736.1	-3.39	-21.79
1736.1	-2.97	-21.77	1736.2	-2.74	-21.71	1736.1	-3.44	-21.70
1736.0	-3.36	-21.70	1735.8	-3.69	-21.69	1736.4	-3.03	-21.69
1736.1	-3.41	-21.62	1736.1	-2.76	-21.61	1736.1	-3.70	-21.58
1736.1	-3.05	-21.58	1736.0	-3.44	-21.53	1736.1	-3.39	-21.53
1736.1	-2.78	-21.52	1735.9	-3.47	-21.52	1736.0	-3.73	-21.50
1736.3	-3.06	-21.47	1736.0	-3.45	-21.44	1736.1	-3.48	-21.42
1736.1	-3.49	-21.42	1736.2	-3.06	-21.42	1736.3	-3.76	-21.38
1736.1	-3.53	-21.35	1736.1	-3.42	-21.35	1736.2	-2.81	-21.34
1736.1	-4.17	-21.33	1736.8	-3.07	-21.31	1736.1	-3.77	-21.26
1736.1	-3.55	-21.25	1736.1	-3.09	-21.25	1736.1	-3.78	-21.22
1735.7	-3.46	-21.21	1736.1	-4.18	-21.18	1736.0	-3.50	-21.18
1736.1	-3.12	-21.16	1736.1	-3.81	-21.14	1735.7	-4.22	-21.11
1736.2	-2.88	-21.11	1735.9	-3.54	-21.10	1736.1	-3.13	-21.09
1736.2	-3.81	-21.09	1736.2	-3.13	-21.05	1736.0	-3.57	-21.04
1735.4	-4.27	-21.01	1736.0	-3.50	-21.01	1735.8	-3.84	-20.99
1735.8	-3.60	-20.97	1736.3	-3.16	-20.97	1736.0	-2.90	-20.94
1735.4	-4.28	-20.93	1736.3	-3.57	-20.92	1736.0	-2.92	-20.91
1736.1	-3.17	-20.90	1734.8	-3.59	-20.85	1735.7	-3.18	-20.83
1734.9	-3.55	-20.83	1734.9	-3.53	-20.81	1736.1	-3.68	-20.80
1735.5	-2.90	-20.76	1735.5	-3.25	-20.68	1735.1	-2.95	-20.64
1735.5	-2.90	-20.76						
			LUNAR ORBITER PHOTOGRAPHIC SITE V 23.1					
1736.4	6.87	4.19	1736.4	6.63	4.23	1735.9	7.66	4.26
1735.9	7.88	4.27	1736.7	7.15	4.27	1736.0	7.36	4.28
1736.0	7.50	4.30	1735.7	8.19	4.31	1735.9	7.81	4.31
1735.8	8.09	4.34	1735.7	8.64	4.35	1735.6	8.38	4.36
1735.4	8.95	4.37	1735.5	8.51	4.38	1735.8	7.01	4.67
1736.8	6.49	4.68	1737.1	6.62	4.73	1736.1	7.50	4.73
1736.2	7.54	4.76	1736.4	6.94	4.78	1736.2	7.34	4.78
1736.1	7.30	4.79	1735.9	8.05	4.80	1736.0	7.96	4.82
1735.9	8.15	4.83	1735.9	8.35	4.85	1735.5	8.95	4.86
1735.7	8.60	4.87	1737.0	6.60	5.12	1736.6	7.07	5.12
1736.9	6.54	5.14	1736.6	6.88	5.14	1736.5	6.76	5.15
1736.6	6.89	5.17	1736.4	7.33	5.18	1736.7	7.10	5.18
1736.0	8.31	5.19	1735.8	7.97	5.19	1736.2	7.77	5.19
1736.4	7.29	5.20	1736.7	7.52	5.22	1736.5	7.41	5.23
1736.2	8.18	5.24	1736.1	8.41	5.25	1736.2	8.08	5.25
1736.3	7.71	5.26	1736.0	8.76	5.30	1736.0	8.59	5.30
1736.1	8.80	5.31	1736.0	8.94	5.35	1735.8	6.75	5.51
1736.5	7.22	5.53	1736.3	7.07	5.53	1736.7	6.95	5.55
1736.3	7.70	5.56	1736.6	7.35	5.56	1736.4	6.65	5.57
1736.2	7.75	5.59	1736.7	7.18	5.59	1736.5	7.49	5.62
1736.2	8.37	5.63	1736.2	8.18	5.64	1736.3	8.03	5.65
1735.9	8.98	5.69	1736.3	8.59	5.70	1736.3	8.48	5.70
1736.3	8.80	5.72	1737.2	6.62	5.75	1734.6	6.81	5.77

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.6	7.32	5.78	1736.8	7.13	5.79	1738.2	6.54	5.80
1736.4	7.74	5.82	1737.2	6.97	5.83	1736.5	7.59	5.85
1736.6	7.90	5.85	1736.8	7.47	5.85	1736.7	7.25	5.85
1736.3	8.36	5.86	1736.4	8.00	5.87	1736.6	8.03	5.89
1737.1	6.58	5.90	1737.0	6.97	5.91	1737.0	6.69	5.91
1736.7	6.81	5.92	1736.5	8.10	5.92	1736.7	7.61	5.94
1736.1	8.72	5.96	1736.6	7.68	5.96	1736.5	7.86	5.96
1736.2	7.40	5.96	1736.5	7.27	5.97	1736.2	7.07	5.97
1736.3	8.38	6.00	1736.4	7.81	6.00	1736.2	8.18	6.01
1736.1	7.95	6.03	1736.1	8.41	6.04	1735.7	8.78	6.07
1736.0	8.64	6.07	1736.0	8.50	6.08	1735.7	8.82	6.10
1737.3	6.57	6.10	1737.0	6.86	6.12	1736.9	6.62	6.13
1736.8	6.97	6.14	1736.7	6.81	6.14	1736.9	7.13	6.15
1736.7	7.33	6.16	1736.7	7.47	6.17	1736.7	7.75	6.18
1736.5	8.16	6.23	1736.5	7.66	6.23	1736.5	7.63	6.25
1735.8	7.75	6.25	1736.3	8.47	6.26	1736.2	8.08	6.26
1735.9	7.81	6.26	1736.6	7.88	6.27	1736.3	8.25	6.27
1735.9	8.78	6.28	1736.1	8.53	6.29	1736.3	8.40	6.30
1735.6	7.67	6.30	1736.1	8.57	6.32	1736.8	6.56	6.43
1736.8	7.32	6.48	1736.6	6.73	6.48	1736.6	7.01	6.48
1736.9	6.85	6.48	1736.8	7.14	6.52	1736.7	7.51	6.53
1736.8	7.38	6.53	1736.4	8.08	6.55	1736.8	7.45	6.56
1736.8	7.77	6.56	1736.5	7.99	6.59	1736.4	8.25	6.60
1736.4	8.45	6.64	1736.3	8.62	6.67	1736.7	6.83	6.74
1736.8	6.61	6.77	1736.8	7.01	6.77	1736.9	7.11	6.79
1736.9	6.77	6.79	1737.0	7.27	6.82	1737.0	7.43	6.82
1736.5	7.59	6.84	1736.9	7.81	6.85	1736.9	7.77	6.87
1736.7	7.97	6.88	1736.7	8.15	6.91	1736.6	8.63	6.93
1736.6	8.39	6.95	1737.6	6.66	7.13	1737.6	6.81	7.13
1737.2	7.14	7.16	1736.9	6.85	7.17	1737.2	7.12	7.20
1737.1	7.59	7.20	1737.1	7.46	7.21	1736.9	7.82	7.22
1737.1	7.23	7.23	1737.0	7.71	7.24	1736.9	7.82	7.26
1736.9	8.09	7.29	1736.8	8.01	7.30	1736.9	8.18	7.31
1736.9	8.33	7.33						

LUNAR ORBITER PHOTOGRAPHIC SITE V 18

1737.2	1.89	16.76	1737.8	2.09	16.79	1736.9	2.19	16.81
1737.9	2.27	16.82	1737.4	2.53	16.87	1737.4	2.69	16.88
1737.5	2.91	16.89	1737.5	3.20	16.90	1737.7	3.34	16.91
1737.5	3.05	16.91	1737.6	3.67	16.95	1737.6	3.54	16.96
1737.3	1.78	17.08	1737.5	1.87	17.09	1737.5	2.40	17.12
1737.2	2.21	17.12	1737.6	2.08	17.12	1737.9	2.54	17.13
1737.7	3.03	17.17	1737.6	3.27	17.19	1737.8	3.82	17.25
1737.6	3.69	17.26	1737.4	1.78	17.45	1737.1	1.83	17.47
1737.4	1.92	17.48	1737.6	2.09	17.49	1737.5	2.23	17.49
1737.6	2.37	17.49	1737.9	2.53	17.54	1737.7	3.07	17.57
1738.1	2.95	17.59	1737.5	3.17	17.59	1737.4	3.54	17.59
1737.4	3.30	17.59	1737.7	3.75	17.64	1738.1	1.75	17.76
1737.6	1.86	17.79	1737.4	2.12	17.79	1737.9	1.60	17.79
1737.3	2.30	17.84	1737.6	2.47	17.84	1737.3	2.22	17.84
1737.6	2.81	17.87	1737.6	2.69	17.87	1737.5	2.97	17.88
1737.5	3.09	17.88	1736.9	3.28	17.91	1737.4	3.48	17.95
1737.7	1.68	17.97	1737.8	1.57	18.00	1737.5	1.75	18.01
1737.6	1.87	18.01	1737.3	2.27	18.03	1737.2	2.06	18.04
1737.2	2.20	18.05	1737.2	2.39	18.07	1737.6	2.90	18.07
1737.5	2.70	18.07	1737.2	2.44	18.07	1737.5	2.99	18.08
1737.6	3.51	18.13	1737.4	3.35	18.14	1737.5	3.19	18.15
1737.7	3.77	18.17	1737.4	3.66	18.18	1737.1	1.69	18.19
1737.1	1.58	18.20	1737.0	1.94	18.24	1737.3	2.16	18.25
1737.3	2.37	18.28	1737.3	2.56	18.30	1737.3	2.72	18.31
1737.3	3.01	18.32	1737.3	3.18	18.36	1737.5	3.55	18.36
1737.6	3.38	18.37	1737.5	3.78	18.41	1736.8	1.48	18.54
1737.0	1.89	18.56	1736.4	1.60	18.58	1737.2	1.75	18.59
1737.5	2.40	18.61	1737.8	2.79	18.62	1737.3	2.20	18.62
1737.5	2.92	18.67	1737.5	3.16	18.71	1737.4	3.13	18.72
1737.4	3.32	18.73	1737.6	3.56	18.74	1737.9	3.79	18.75
1737.4	3.43	18.75	1738.0	1.43	19.01	1736.8	1.72	19.05
1736.4	1.58	19.08	1737.3	2.30	19.09	1736.6	1.69	19.09
1738.0	2.51	19.11	1736.9	2.19	19.12	1737.0	2.02	19.12
1738.0	2.81	19.12	1737.8	2.89	19.12	1738.4	2.70	19.15
1737.8	3.07	19.18	1738.2	3.30	19.19	1737.8	3.38	19.19
1737.5	3.00	19.20	1737.8	3.16	19.22	1737.6	3.44	19.26
1738.2	3.82	19.28	1738.5	1.41	19.36	1738.4	2.36	19.44
1736.9	1.86	19.45	1736.5	1.73	19.45	1738.0	2.45	19.46
1737.1	2.06	19.48	1737.5	2.73	19.48	1737.9	2.41	19.49
1736.8	1.82	19.51	1737.1	2.19	19.51	1737.6	2.59	19.53
1737.5	2.97	19.56	1737.5	3.25	19.57	1737.6	2.90	19.58
1737.4	3.41	19.63	1737.9	3.50	19.64			

LUNAR ORBITER PHOTOGRAPHIC SITE V 34

1734.5	-7.96	-18.18	1734.1	-7.76	-18.18	1733.9	-8.14	-18.18
1734.3	-7.60	-18.16	1734.1	-8.05	-18.16	1734.7	-7.67	-18.14
1734.6	-7.39	-18.12	1734.0	-7.99	-18.11	1734.6	-7.30	-18.08
1734.4	-7.26	-18.05	1734.5	-7.22	-18.04	1734.9	-7.08	-18.03
1734.0	-6.86	-18.02	1734.2	-7.02	-18.01	1734.1	-6.98	-18.01
1734.0	-6.52	-17.99	1734.1	-6.61	-17.98	1734.0	-6.23	-17.97
1734.0	-6.32	-17.97	1734.0	-5.96	-17.95	1734.0	-6.41	-17.95
1734.2	-6.13	-17.92	1733.9	-5.81	-17.91	1734.4	-7.66	-17.83

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.0	-7.45	-17.82	1734.2	-8.04	-17.81	1734.1	-7.96	-17.80
1734.3	-7.63	-17.77	1735.3	-7.28	-17.76	1734.4	-7.04	-17.73
1734.4	-6.87	-17.71	1734.3	-6.71	-17.70	1734.5	-8.21	-17.67
1734.5	-6.57	-17.66	1734.2	-7.85	-17.66	1734.1	-6.37	-17.66
1734.1	-5.92	-17.65	1734.8	-7.80	-17.64	1734.1	-7.60	-17.64
1734.3	-6.30	-17.64	1734.1	-7.95	-17.62	1734.9	-7.48	-17.60
1735.3	-7.35	-17.59	1734.6	-7.06	-17.59	1734.6	-7.71	-17.59
1735.3	-7.33	-17.58	1734.3	-6.78	-17.55	1734.2	-6.89	-17.53
1734.3	-6.40	-17.51	1734.3	-6.50	-17.50	1734.2	-6.21	-17.48
1733.9	-6.11	-17.45	1734.2	-5.89	-17.45	1734.6	-8.21	-17.32
1734.2	-7.67	-17.31	1734.1	-7.49	-17.30	1734.2	-7.88	-17.30
1734.9	-8.13	-17.29	1735.2	-7.34	-17.27	1734.4	-7.48	-17.25
1734.4	-7.74	-17.24	1734.4	-6.93	-17.23	1734.2	-6.70	-17.22
1734.3	-6.79	-17.22	1735.3	-7.34	-17.21	1734.5	-7.07	-17.21
1734.4	-7.19	-17.20	1734.3	-6.54	-17.17	1734.2	-6.06	-17.14
1734.4	-6.19	-17.11	1734.3	-8.02	-17.07	1734.5	-8.26	-17.06
1734.1	-7.77	-17.00	1734.3	-7.59	-16.98	1734.1	-7.88	-16.97
1734.4	-8.21	-16.96	1734.3	-7.67	-16.93	1734.1	-7.10	-16.91
1734.6	-8.12	-16.91	1734.2	-7.04	-16.90	1734.0	-7.24	-16.87
1734.2	-7.99	-16.85	1735.3	-6.70	-16.83	1734.4	-7.70	-16.83
1734.2	-6.53	-16.82	1735.9	-7.45	-16.82	1734.2	-6.84	-16.81
1735.6	-7.53	-16.81	1733.9	-6.15	-16.81	1734.2	-6.37	-16.80
1734.1	-7.79	-16.80	1734.2	-6.44	-16.80	1734.9	-8.30	-16.79
1734.3	-7.14	-16.78	1735.8	-7.46	-16.75	1734.4	-6.77	-16.74
1734.4	-6.98	-16.73	1734.5	-7.92	-16.73	1734.2	-6.45	-16.72
1735.2	-8.34	-16.70	1734.3	-7.17	-16.69	1734.4	-6.79	-16.69
1734.5	-6.08	-16.68	1734.4	-7.33	-16.68	1736.0	-7.56	-16.67
1734.3	-6.33	-16.67	1734.5	-7.30	-16.67	1734.6	-5.95	-16.66
1734.9	-7.94	-16.64	1734.4	-6.74	-16.64	1734.7	-7.01	-16.63
1734.5	-6.48	-16.63	1736.1	-7.61	-16.61	1734.4	-6.31	-16.61
1735.3	-7.82	-16.60	1734.5	-5.99	-16.60	1734.5	-6.26	-16.58
1734.6	-6.60	-16.58	1735.7	-7.70	-16.58	1734.4	-6.74	-16.56
1734.3	-6.50	-16.53	1734.4	-6.85	-16.52	1734.5	-7.26	-16.51
1734.4	-7.03	-16.51	1734.6	-6.24	-16.50	1734.3	-6.41	-16.46
1734.6	-6.28	-16.46	1734.5	-6.11	-16.46	1734.5	-5.97	-16.45
1734.5	-6.57	-16.45	1735.1	-8.20	-16.42	1735.6	-8.32	-16.41
1734.5	-6.14	-16.41	1734.4	-7.86	-16.41	1734.5	-7.98	-16.40
1734.5	-7.76	-16.36	1734.9	-7.22	-16.34	1735.5	-7.37	-16.33
1734.3	-6.76	-16.32	1734.3	-6.96	-16.32	1735.4	-7.44	-16.31
1734.6	-6.43	-16.27	1734.3	-6.62	-16.26	1734.5	-6.22	-16.26
1734.4	-6.33	-16.25	1734.5	-5.97	-16.21	1734.6	-8.24	-16.06
1734.8	-8.36	-16.06	1734.5	-7.58	-16.03	1734.4	-8.13	-16.02
1734.5	-7.67	-16.02	1734.4	-8.04	-16.00	1734.6	-7.83	-16.00
1735.4	-7.13	-16.00	1734.8	-7.30	-15.98	1734.6	-7.74	-15.98
1735.2	-7.04	-15.97	1734.7	-7.46	-15.96	1734.5	-6.87	-15.96
1734.5	-6.76	-15.95	1734.5	-6.36	-15.94	1734.4	-6.66	-15.93
1734.8	-6.02	-15.89	1734.5	-6.48	-15.88	1734.8	-7.73	-15.82
1735.3	-8.42	-15.80	1734.6	-8.00	-15.75	1734.7	-7.63	-15.74
1734.6	-7.89	-15.74	1734.8	-7.81	-15.74	1734.8	-7.73	-15.74
1734.8	-7.89	-15.72	1734.7	-7.49	-15.72	1734.8	-7.38	-15.69
1734.7	-7.75	-15.69	1736.2	-7.01	-15.69	1735.8	-7.06	-15.69
1735.1	-6.80	-15.69	1735.2	-7.16	-15.68	1734.9	-7.26	-15.68
1734.9	-6.71	-15.65	1734.7	-6.61	-15.64	1735.3	-6.38	-15.63
1734.4	-6.29	-15.62	1733.8	-6.13	-15.61	1734.9	-6.28	-15.60
1735.2	-8.40	-15.52	1735.2	-8.30	-15.50	1734.4	-7.95	-15.48
1734.6	-7.77	-15.48	1735.0	-8.10	-15.48	1734.5	-7.93	-15.46
1735.2	-7.76	-15.45	1734.6	-7.41	-15.42	1734.6	-7.33	-15.42
1735.4	-6.80	-15.42	1734.7	-7.47	-15.41	1735.4	-6.76	-15.41
1734.7	-7.58	-15.40	1734.8	-7.63	-15.40	1735.2	-6.94	-15.40
1735.6	-7.19	-15.39	1735.9	-7.14	-15.39	1734.9	-7.27	-15.38
1734.8	-6.62	-15.37	1735.1	-6.41	-15.37	1735.0	-6.30	-15.31
1734.8	-6.62	-15.37						

LUNAR ORBITER PHOTOGRAPHIC SITE III P7AB

1735.5	.50	-2.47	1735.6	.65	-2.40	1735.7	.83	-2.30
1735.2	.62	-2.26	1735.6	.44	-2.18	1735.7	.79	-2.16
1735.6	.61	-2.09	1735.8	.80	-2.05	1735.8	.43	-2.05
1735.5	.86	-2.04	1735.7	.57	-2.01	1735.7	.97	-2.01
1735.7	.98	-1.98	1735.5	.92	-1.95	1735.9	.75	-1.94
1735.8	.38	-1.94	1735.9	.89	-1.94	1735.8	.84	-1.93
1735.8	.89	-1.92	1735.7	1.55	-1.89	1736.9	1.04	-1.88
1735.9	.89	-1.87	1735.7	1.14	-1.86	1736.0	.37	-1.85
1735.9	.54	-1.85	1736.3	.95	-1.85	1735.7	1.54	-1.84
1735.7	.72	-1.84	1736.0	1.36	-1.83	1736.2	.91	-1.83
1736.2	1.00	-1.80	1736.4	1.61	-1.80	1736.0	.36	-1.79
1736.0	1.13	-1.79	1736.0	.82	-1.77	1736.2	1.02	-1.77
1736.1	.93	-1.76	1736.0	.52	-1.75	1736.0	.90	-1.73
1735.9	1.54	-1.73	1736.2	1.77	-1.72	1736.1	.69	-1.71
1736.0	1.61	-1.70	1736.2	1.32	-1.70	1736.3	1.14	-1.69
1736.1	.34	-1.68	1735.9	.69	-1.67	1736.7	1.90	-1.67
1735.9	1.52	-1.67	1736.1	.79	-1.67	1735.8	1.74	-1.66
1736.2	.47	-1.64	1736.2	1.62	-1.63	1736.1	.73	-1.63
1735.9	1.67	-1.63	1736.5	1.31	-1.62	1736.2	.91	-1.61
1735.9	1.50	-1.60	1736.4	1.73	-1.58	1736.2	1.59	-1.58
1736.2	.65	-1.57	1736.1	.83	-1.57	1736.0	1.11	-1.57
1735.9	1.66	-1.56	1736.2	.79	-1.55	1736.2	.72	-1.54
1736.2	.98	-1.53	1736.1	1.48	-1.52	1736.3	1.30	-1.52
1736.2	.28	-1.52	1736.2	.62	-1.50	1736.2	.72	-1.50
1736.3	.43	-1.49	1736.3	1.73	-1.49	1736.1	1.57	-1.49

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.2	.14	-1.48	1736.2	.75	-1.46	1736.3	.98	-1.45
1736.2	.81	-1.44	1736.4	1.27	-1.43	1736.3	1.47	-1.43
1736.4	1.12	-1.41	1736.2	.14	-1.40	1736.3	.64	-1.40
1736.2	1.71	-1.40	1736.3	.29	-1.40	1736.3	.96	-1.39
1736.4	.43	-1.39	1736.3	.69	-1.38	1736.3	.79	-1.37
1736.2	1.56	-1.36	1736.3	.08	-1.35	1736.3	1.08	-1.35
1736.5	1.25	-1.34	1736.2	1.69	-1.34	1736.4	.74	-1.33
1736.4	.68	-1.32	1736.4	.25	-1.32	1736.4	.93	-1.32
1736.4	.66	-1.30	1736.4	1.09	-1.29	1736.4	.79	-1.29
1736.4	.42	-1.29	1736.3	1.67	-1.26	1736.4	1.07	-1.24
1736.2	1.52	-1.24	1735.8	.00	-1.24	1736.4	.77	-1.24
1736.3	.10	-1.23	1736.4	.67	-1.23	1736.5	.93	-1.23
1736.4	.71	-1.23	1736.3	1.44	-1.23	1736.4	.59	-1.21
1736.6	1.22	-1.20	1736.3	1.52	-1.19	1736.4	.05	-1.19
1736.4	.65	-1.18	1736.5	1.07	-1.18	1736.5	.77	-1.17
1736.4	.72	-1.17	1736.5	.90	-1.16	1736.5	1.06	-1.15
1736.4	1.64	-1.15	1736.4	1.43	-1.15	1737.2	1.51	-1.14
1736.6	1.05	-1.14	1736.4	1.42	-1.12	1736.4	.71	-1.11
1736.5	.63	-1.11	1736.5	.88	-1.10	1736.5	1.01	-1.10
1736.5	.37	-1.09	1736.4	1.50	-1.08	1736.4	.19	-1.08
1736.6	.06	-1.06	1736.6	1.04	-1.04	1736.6	.90	-1.04
1736.6	1.20	-1.04	1736.6	1.64	-1.04	1735.6	-.04	-1.04
1736.5	.53	-1.03	1736.5	.61	-1.03	1736.5	.67	-1.03
1736.6	.19	-1.01	1736.6	.34	-1.01	1736.5	.71	-1.00
1736.6	.89	-1.00	1736.9	1.40	-.99	1736.6	1.00	-.95
1736.6	.88	-.94	1736.6	.59	-.94	1736.6	.02	-.93
1736.6	.69	-.92	1736.7	1.57	-.92	1736.7	1.19	-.92
1737.0	.18	-.89	1736.6	.97	-.89	1736.7	1.37	-.89
1735.8	-.08	-.88	1738.0	.86	-.87	1736.7	.33	-.87
1736.6	.70	-.85	1737.0	1.55	-.84	1736.4	.85	-.82
1736.8	.63	-.82	1736.7	1.15	-.81	1736.7	.48	-.80
1736.9	1.36	-.80	1735.7	-.13	-.79	1736.8	.66	-.79
1736.6	.84	-.78	1736.7	.97	-.78	1735.8	-.11	-.78
1736.7	.61	-.75	1736.9	-.06	-.74	1736.7	1.48	-.72
1736.8	.17	-.72	1736.8	.94	-.72	1736.8	.69	-.71
1737.0	1.34	-.71	1736.9	.33	-.70	1736.9	.83	-.70
1736.8	1.11	-.69	1736.9	.57	-.69	1736.9	1.14	-.66
1737.1	.01	-.66	1736.9	.45	-.65	1736.9	.62	-.64
1736.9	1.46	-.64	1737.0	.93	-.62	1737.2	.14	-.62
1736.9	-.08	-.62	1737.1	.54	-.60	1736.9	1.32	-.60
1736.9	.64	-.59	1737.2	.27	-.57	1737.1	.92	-.56
1736.9	.81	-.56	1737.4	.43	-.54	1737.1	.69	-.53
1737.0	1.44	-.52	1737.1	1.10	-.51	1737.2	1.32	-.51
1737.2	.80	-.50	1737.1	.56	-.50	1737.1	.90	-.48
1737.2	.69	-.46	1737.2	.59	-.45	1737.1	.71	-.43
1737.2	.66	-.43	1737.2	1.43	-.41	1737.1	.78	-.40
1738.2	.14	-.40	1737.2	1.28	-.39	1737.0	1.07	-.39
1737.1	.89	-.37	1737.5	.24	-.37	1737.6	.52	-.35
1737.2	1.25	-.30	1737.6	1.09	-.26	1737.4	1.05	-.19
1737.8	1.22	-.17						

LUNAR ORBITER PHOTOGRAPHIC SITE III P1

1735.3	2.35	33.93	1735.2	2.47	33.97	1735.4	2.36	33.98
1735.4	2.34	34.01	1735.3	2.56	34.01	1735.3	2.46	34.02
1735.2	2.53	34.04	1735.4	2.34	34.05	1735.3	2.49	34.06
1735.3	2.45	34.07	1735.3	2.80	34.10	1735.4	2.33	34.11
1735.3	2.50	34.12	1735.4	2.47	34.13	1735.2	2.76	34.16
1735.2	2.74	34.17	1735.5	3.05	34.17	1735.3	2.32	34.17
1735.5	2.87	34.19	1735.3	2.71	34.21	1735.5	2.86	34.21
1735.4	2.45	34.21	1735.2	2.76	34.23	1735.4	2.43	34.24
1735.2	2.27	34.26	1735.4	3.03	34.26	1735.3	2.43	34.28
1735.5	2.82	34.30	1735.5	3.14	34.30	1735.1	2.73	34.30
1735.4	3.02	34.31	1735.3	2.67	34.31	1735.1	2.43	34.31
1735.1	2.49	34.33	1735.4	3.14	34.35	1735.1	2.71	34.36
1735.4	2.81	34.36	1734.7	2.60	34.37	1735.5	3.03	34.38
1734.8	2.55	34.39	1735.0	2.47	34.39	1735.4	3.13	34.39
1735.2	2.27	34.40	1735.1	2.66	34.40	1735.1	2.64	34.41
1735.2	2.41	34.42	1735.1	2.81	34.43	1735.6	3.36	34.44
1735.2	2.24	34.45	1735.1	2.69	34.45	1734.7	2.51	34.46
1734.9	2.44	34.47	1735.1	2.79	34.48	1734.9	2.55	34.48
1735.0	2.87	34.49	1735.2	2.38	34.49	1734.9	3.01	34.50
1735.0	2.62	34.50	1735.5	3.68	34.51	1735.5	3.35	34.52
1735.2	2.70	34.52	1734.8	2.47	34.54	1735.3	3.07	34.54
1735.1	2.66	34.55	1734.9	2.57	34.55	1735.3	2.97	34.55
1735.3	2.23	34.56	1735.5	3.66	34.56	1735.1	2.78	34.56
1735.1	3.10	34.57	1734.8	2.50	34.58	1735.2	2.68	34.58
1735.2	2.88	34.58	1735.3	2.36	34.59	1734.8	2.46	34.60
1735.1	2.67	34.60	1735.1	2.58	34.61	1735.1	2.76	34.61
1735.4	3.29	34.62	1735.3	2.41	34.62	1735.3	2.19	34.63
1734.8	2.08	34.63	1735.3	2.55	34.64	1735.3	2.40	34.64
1735.2	2.86	34.65	1735.4	2.46	34.66	1734.9	3.07	34.66
1735.2	2.75	34.66	1735.2	2.56	34.67	1735.3	2.39	34.67
1734.9	3.43	34.67	1735.3	2.19	34.67	1735.1	2.66	34.68
1735.1	2.61	34.68	1735.5	3.60	34.69	1735.4	2.47	34.69
1735.2	2.86	34.71	1735.2	2.75	34.71	1735.4	2.17	34.71
1735.3	3.28	34.72	1735.3	2.65	34.72	1735.3	2.38	34.73
1735.4	2.44	34.73	1735.4	2.16	34.73	1734.5	2.59	34.74
1735.4	2.33	34.75	1735.4	2.51	34.75	1734.4	2.16	34.76
1735.3	3.25	34.77	1735.4	2.39	34.78	1735.4	2.22	34.78

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.4	2.17	34.78	1735.4	2.73	34.78	1735.2	3.40	34.78
1735.3	2.84	34.78	1735.2	2.55	34.79	1734.7	2.63	34.80
1735.2	3.58	34.80	1735.4	2.43	34.80	1735.3	2.60	34.81
1735.3	2.93	34.81	1735.3	2.51	34.83	1735.3	2.82	34.83
1735.2	3.22	34.85	1735.4	3.03	34.86	1735.3	3.54	34.86
1735.5	2.13	34.87	1735.3	2.40	34.88	1735.4	2.48	34.90
1735.4	2.61	34.90	1735.3	3.03	34.90	1735.4	2.81	34.92
1735.5	2.75	34.92	1735.0	3.35	34.92	1735.4	2.90	34.92
1735.4	2.22	34.92	1735.3	3.52	34.93	1735.4	3.20	34.93
1735.3	2.49	34.95	1735.3	3.52	34.98	1735.5	2.84	34.98
1735.5	3.31	34.98	1735.4	2.33	34.99	1735.5	2.09	34.99
1735.3	3.16	34.99	1735.5	2.46	35.00	1735.3	2.79	35.00
1735.4	2.88	35.00	1735.5	2.70	35.02	1735.5	2.18	35.02
1735.5	2.69	35.03	1735.4	2.59	35.04	1735.5	3.28	35.04
1735.3	3.15	35.05	1735.4	3.00	35.05	1735.5	2.03	35.05
1735.3	3.44	35.07	1735.4	2.84	35.08	1735.5	2.77	35.08
1735.5	2.03	35.09	1735.5	2.43	35.10	1735.4	2.87	35.11
1735.3	3.14	35.11	1735.4	2.98	35.12	1735.5	2.53	35.12
1735.4	2.14	35.12	1735.6	3.25	35.13	1735.5	2.29	35.13
1735.4	2.74	35.14	1735.6	2.03	35.14	1735.4	2.11	35.15
1735.4	3.44	35.16	1735.4	2.74	35.17	1735.5	2.78	35.18
1735.3	3.10	35.18	1735.5	3.22	35.19	1735.5	2.53	35.19
1735.4	2.96	35.20	1735.5	2.64	35.21	1735.5	2.38	35.21
1735.4	2.71	35.21	1735.6	2.82	35.22	1735.7	2.24	35.22
1735.5	2.02	35.23	1735.4	2.52	35.24	1735.5	2.07	35.25
1735.5	2.78	35.25	1735.5	2.64	35.26	1735.4	2.93	35.27
1735.3	3.42	35.27	1735.7	2.23	35.27	1735.4	2.70	35.27
1735.5	2.79	35.29	1735.5	2.58	35.30	1735.4	2.67	35.30
1735.7	2.36	35.30	1735.7	2.23	35.31	1735.5	2.48	35.32
1735.8	1.94	35.33	1735.5	3.04	35.33	1735.5	2.76	35.34
1735.4	2.70	35.35	1735.4	2.88	35.37	1735.5	2.61	35.38
1735.6	2.45	35.38	1735.4	2.66	35.38	1735.6	2.03	35.38
1735.8	2.56	35.39	1735.5	2.76	35.40	1735.4	3.32	35.40
1735.5	3.17	35.40	1735.5	3.03	35.41	1735.6	1.89	35.43
1735.8	2.54	35.43	1735.7	2.61	35.44	1735.7	2.75	35.45
1735.8	2.15	35.45	1735.5	3.02	35.46	1735.3	3.32	35.46
1735.6	2.41	35.47	1735.7	2.57	35.48	1735.7	2.71	35.49
1735.5	2.02	35.51	1735.8	2.99	35.51	1735.4	2.14	35.51
1735.5	3.12	35.52	1735.6	2.26	35.52	1735.5	2.66	35.53
1735.6	2.40	35.53	1735.9	2.96	35.54	1735.7	2.55	35.55
1735.4	3.28	35.56	1735.6	2.80	35.56	1735.5	1.87	35.57
1735.4	2.09	35.57	1735.4	1.97	35.58	1735.7	3.11	35.58
1735.5	2.23	35.58	1735.4	2.39	35.59	1735.5	2.59	35.59
1735.7	2.53	35.60	1735.8	2.64	35.61	1735.5	3.27	35.62
1735.6	2.79	35.63	1735.4	2.10	35.64	1735.4	2.24	35.64
1735.3	2.35	35.64	1735.4	1.86	35.66	1735.4	2.56	35.66
1735.4	1.97	35.66	1735.7	2.96	35.66	1735.7	2.90	35.67
1735.4	2.07	35.68	1735.3	2.32	35.69	1735.6	2.74	35.69
1735.5	3.08	35.70	1735.6	2.66	35.70	1735.4	2.56	35.70
1735.4	2.50	35.71	1735.4	2.20	35.72	1735.4	1.80	35.73
1735.8	2.88	35.73	1735.4	2.44	35.73	1735.5	1.95	35.73
1735.6	3.17	35.74	1735.5	2.64	35.75	1735.5	2.60	35.75
1735.3	2.30	35.75	1735.4	2.03	35.75	1735.4	2.47	35.76
1735.3	1.78	35.77	1735.3	1.76	35.77	1735.3	1.70	35.77
1736.5	2.51	35.78	1735.4	2.72	35.79	1735.6	3.06	35.79
1735.4	2.63	35.79	1735.3	2.30	35.79	1735.6	2.14	35.80
1735.7	3.17	35.81	1735.4	1.71	35.81	1735.5	2.73	35.81
1735.5	1.87	35.82	1735.6	2.86	35.82	1735.5	2.55	35.82
1735.4	2.46	35.82	1735.5	2.61	35.82	1735.4	2.02	35.83
1735.8	3.02	35.84	1735.5	1.69	35.84	1735.5	2.85	35.87
1735.3	1.99	35.87	1735.7	3.15	35.87	1735.5	1.67	35.87
1735.5	2.70	35.87	1735.5	2.68	35.88	1735.5	3.00	35.88
1735.3	1.73	35.88	1735.5	2.58	35.88	1735.3	2.40	35.90
1735.4	2.25	35.90	1735.4	2.84	35.90	1735.5	2.52	35.90
1735.5	1.86	35.90	1735.3	1.70	35.91	1735.5	2.67	35.91
1735.1	1.61	35.92	1735.4	1.68	35.93	1735.4	3.13	35.93
1735.4	1.83	35.94	1735.3	1.65	35.94	1735.5	2.57	35.94
1735.3	2.22	35.94	1735.4	1.76	35.95	1735.4	2.11	35.96
1735.4	1.97	35.96	1735.4	3.11	35.96	1735.5	2.40	35.97
1735.5	2.54	35.97	1735.4	2.08	35.97	1735.4	2.67	35.97
1735.5	1.73	35.98	1735.4	1.76	36.01	1735.4	1.81	36.01
1735.5	2.53	36.02	1735.4	3.08	36.02	1735.4	1.95	36.02
1735.4	2.78	36.02	1735.4	2.43	36.03	1735.4	1.68	36.03
1735.2	2.21	36.03	1735.4	2.35	36.03	1735.4	2.64	36.03
1735.4	3.08	36.06	1735.6	2.93	36.06	1735.4	2.50	36.07
1735.3	2.18	36.10	1735.5	2.05	36.11	1735.4	2.75	36.11
1735.3	1.91	36.11	1735.4	2.35	36.12	1735.5	2.40	36.12
1735.4	2.62	36.13	1735.5	2.47	36.13	1735.6	2.92	36.14
1735.3	2.16	36.17	1735.3	2.57	36.17	1735.4	3.04	36.18
1735.2	2.70	36.20	1735.4	2.38	36.20	1735.4	2.47	36.21
1735.4	2.34	36.21	1735.4	2.86	36.22	1735.4	2.56	36.24
1735.2	2.68	36.25	1735.3	3.00	36.27	1735.4	2.84	36.27
1735.3	2.10	36.27	1735.4	2.36	36.28	1735.2	2.65	36.30
1735.6	3.00	36.31	1735.4	2.82	36.32	1735.4	2.52	36.34
1735.5	2.12	36.35	1735.3	2.03	36.36	1735.4	2.95	36.36
1735.5	2.83	36.39	1735.4	2.91	36.41	1735.4	2.09	36.42
1735.3	2.83	36.45	1735.2	2.03	36.48	1735.4	2.78	36.51
1735.5	2.75	36.59	1735.4	2.76	36.65	1735.8	2.68	36.72
1735.5	2.75	36.59						

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
			LUNAR ORBITER PHOTOGRAPHIC SITE III P11					
1736.0	-3.59	-37.82	1735.9	-3.79	-37.82	1735.8	-3.81	-37.69
1735.9	-3.33	-37.68	1735.6	-3.65	-37.65	1735.6	-3.87	-37.60
1736.0	-3.15	-37.59	1735.7	-2.90	-37.59	1735.6	-3.69	-37.58
1736.2	-3.06	-37.57	1736.2	-3.28	-37.57	1735.6	-3.01	-37.54
1735.7	-3.44	-37.53	1735.7	-3.20	-37.53	1735.8	-2.91	-37.52
1735.6	-3.67	-37.49	1736.1	-2.58	-37.47	1735.8	-2.75	-37.46
1735.8	-3.05	-37.45	1735.7	-3.15	-37.45	1735.6	-3.08	-37.45
1735.7	-3.30	-37.44	1735.6	-3.49	-37.43	1735.6	-2.95	-37.42
1735.8	-2.81	-37.38	1735.6	-3.97	-37.37	1735.6	-3.02	-37.36
1735.6	-3.71	-37.35	1735.7	-3.09	-37.35	1735.6	-3.47	-37.34
1735.5	-2.63	-37.33	1735.8	-3.14	-37.33	1735.5	-3.95	-37.33
1735.5	-3.32	-37.30	1735.7	-2.65	-37.30	1735.6	-3.07	-37.28
1736.0	-2.79	-37.27	1735.7	-3.11	-37.25	1735.6	-2.98	-37.24
1735.9	-3.16	-37.24	1736.1	-2.65	-37.21	1735.5	-3.04	-37.20
1735.6	-3.50	-37.20	1735.7	-3.18	-37.20	1735.7	-2.87	-37.17
1735.5	-4.01	-37.17	1735.6	-3.34	-37.16	1735.5	-3.09	-37.15
1735.5	-3.04	-37.14	1735.4	-3.72	-37.14	1735.5	-3.51	-37.13
1735.4	-3.75	-37.10	1735.5	-3.36	-37.10	1736.0	-2.65	-37.08
1735.7	-2.86	-37.07	1735.6	-3.11	-37.06	1735.4	-3.75	-37.06
1735.6	-3.21	-37.06	1735.6	-4.05	-37.06	1735.4	-3.76	-37.05
1735.5	-3.54	-37.03	1735.7	-3.03	-37.03	1735.6	-2.90	-37.03
1735.9	-2.72	-37.02	1735.5	-3.37	-37.01	1735.4	-3.78	-36.97
1735.5	-3.40	-36.96	1735.6	-3.15	-36.94	1735.6	-3.09	-36.94
1735.5	-3.54	-36.92	1735.6	-4.13	-36.92	1735.5	-3.21	-36.91
1735.5	-3.59	-36.89	1735.7	-2.88	-36.88	1735.5	-3.18	-36.87
1735.4	-3.80	-36.86	1735.4	-3.43	-36.85	1735.7	-3.10	-36.84
1735.5	-3.93	-36.84	1735.5	-3.57	-36.82	1735.6	-3.15	-36.82
1735.6	-4.14	-36.82	1735.5	-3.26	-36.81	1735.6	-3.18	-36.79
1735.6	-2.93	-36.77	1735.6	-3.11	-36.76	1735.5	-3.61	-36.75
1735.5	-3.82	-36.73	1735.5	-3.43	-36.73	1735.5	-4.18	-36.72
1735.5	-3.22	-36.72	1735.6	-3.15	-36.72	1735.5	-3.29	-36.71
1735.5	-2.74	-36.70	1735.9	-3.84	-36.68	1735.6	-3.16	-36.68
1735.4	-3.62	-36.68	1735.5	-4.02	-36.67	1735.5	-3.26	-36.64
1735.7	-3.13	-36.63	1735.6	-2.97	-36.62	1735.4	-3.83	-36.62
1735.6	-3.45	-36.62	1735.5	-3.61	-36.61	1735.7	-3.83	-36.55
1735.4	-3.44	-36.55	1735.6	-3.16	-36.55	1735.5	-3.63	-36.54
1735.6	-3.21	-36.54	1735.5	-4.27	-36.52	1735.5	-3.45	-36.51
1735.6	-3.30	-36.48	1735.5	-3.86	-36.48	1735.8	-2.97	-36.47
1735.5	-3.45	-36.45	1735.6	-3.25	-36.43	1735.6	-3.32	-36.41
1735.0	-3.88	-36.40	1735.6	-3.63	-36.39	1735.7	-3.26	-36.39
1735.7	-2.97	-36.38	1735.7	-3.27	-36.37	1735.5	-4.16	-36.35
1735.6	-3.32	-36.32	1735.6	-3.49	-36.30	1735.7	-3.01	-36.30
1735.6	-3.91	-36.29	1735.6	-3.67	-36.28	1735.6	-3.23	-36.28
1735.8	-3.02	-36.24	1735.6	-4.16	-36.23	1735.5	-3.29	-36.22
1735.5	-3.50	-36.21	1735.6	-3.36	-36.20	1735.6	-3.69	-36.20
1735.5	-3.53	-36.19	1735.6	-3.91	-36.19	1735.6	-3.28	-36.17
1735.4	-4.39	-36.17	1735.5	-3.71	-36.14	1735.5	-3.36	-36.14
1735.7	-3.93	-36.06	1735.4	-4.26	-36.03	1735.7	-3.38	-36.03
1735.3	-3.73	-36.02	1735.6	-3.57	-36.02	1735.7	-3.95	-36.00
1735.7	-3.40	-35.98	1735.3	-3.74	-35.97	1736.0	-3.96	-35.94
1735.7	-3.35	-35.93	1735.5	-3.56	-35.93	1735.7	-3.57	-35.91
1735.0	-3.75	-35.90	1735.7	-3.37	-35.88	1735.7	-3.58	-35.86
1736.0	-3.44	-35.85	1735.8	-3.44	-35.79			
			LUNAR ORBITER PHOTOGRAPHIC SITE II P 8ABC					
1736.8	-.57	-1.98	1736.2	-.41	-1.92	1736.5	-.38	-1.91
1736.3	-.59	-1.88	1736.0	-.21	-1.84	1736.0	-.18	-1.84
1736.2	.09	-1.84	1736.1	.00	-1.81	1736.3	-.63	-1.80
1736.0	.33	-1.79	1736.1	.07	-1.77	1736.4	-.45	-1.75
1736.3	-.22	-1.75	1736.4	.49	-1.74	1736.2	-.03	-1.73
1735.8	.10	-1.68	1736.0	.31	-1.68	1736.2	-.22	-1.65
1736.5	.44	-1.63	1735.8	.70	-1.62	1736.3	.03	-1.62
1736.3	-.05	-1.61	1736.3	-.69	-1.60	1736.3	.08	-1.59
1736.1	-.51	-1.59	1735.6	.62	-1.57	1736.4	.79	-1.56
1736.6	.75	-1.54	1736.3	.69	-1.53	1736.1	-.22	-1.52
1736.3	.94	-1.52	1736.2	.24	-1.51	1736.2	-.00	-1.50
1736.3	.68	-1.49	1736.4	.40	-1.48	1736.2	.10	-1.48
1736.3	.04	-1.48	1736.3	-.53	-1.47	1736.3	-.10	-1.46
1736.5	.71	-1.45	1736.5	.94	-1.44	1736.6	1.06	-1.44
1736.5	.77	-1.43	1736.6	1.23	-1.42	1737.0	1.08	-1.40
1736.3	.11	-1.40	1736.6	.60	-1.39	1736.2	.25	-1.39
1736.5	.93	-1.38	1736.4	.40	-1.38	1736.4	.65	-1.37
1736.1	-.03	-1.37	1736.2	-.07	-1.36	1736.5	.75	-1.36
1736.3	.05	-1.34	1736.2	-.29	-1.34	1736.2	-.13	-1.34
1736.8	1.04	-1.33	1736.8	1.20	-1.33	1736.4	.71	-1.33
1736.2	.22	-1.31	1736.6	.64	-1.31	1736.6	.89	-1.31
1736.0	-.73	-1.29	1736.7	.63	-1.29	1736.2	.38	-1.28
1737.1	1.05	-1.28	1736.5	.75	-1.28	1736.7	-.59	-1.26
1736.3	-.27	-1.25	1737.1	1.03	-1.23	1736.8	.74	-1.23
1736.3	.06	-1.23	1736.2	-.02	-1.23	1736.7	.63	-1.22
1736.6	.89	-1.22	1736.6	.68	-1.22	1736.2	-.10	-1.21
1735.7	.56	-1.21	1736.8	1.18	-1.19	1736.3	.01	-1.19
1736.6	.61	-1.17	1736.9	1.03	-1.17	1736.3	-.16	-1.17
1736.9	.73	-1.16	1736.6	.68	-1.16	1736.7	.86	-1.15
1736.9	1.02	-1.14	1736.9	1.01	-1.13	1735.5	-.62	-1.10
1736.7	.67	-1.10	1736.7	.59	-1.10	1736.1	-.33	-1.09

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.7	.84	-1.09	1736.2	-.17	-1.09	1737.0	.97	-1.09
1736.4	.33	-1.08	1736.9	1.00	-1.08	1736.5	.15	-1.07
1736.3	.02	-1.06	1736.8	1.00	-1.03	1736.7	.86	-1.03
1736.9	1.16	-1.03	1736.4	.49	-1.03	1736.7	.57	-1.02
1735.9	-.80	-1.02	1736.3	-.06	-1.02	1736.7	.63	-1.02
1736.3	.15	-1.00	1736.4	.30	-1.00	1735.7	-.60	-.99
1736.6	.67	-.99	1736.7	.85	-.99	1736.2	-.38	-.95
1736.7	.96	-.94	1736.7	.84	-.93	1736.4	.55	-.93
1736.4	-.02	-.92	1736.7	.65	-.91	1736.4	-.14	-.91
1736.7	1.15	-.91	1736.0	-.83	-.91	1737.5	-.62	-.90
1736.3	-.22	-.90	1736.6	.13	-.89	1736.9	.93	-.88
1736.3	.29	-.86	1736.4	-.11	-.86	1736.7	.81	-.86
1736.2	-.41	-.85	1736.7	.66	-.85	1738.3	.80	-.82
1736.7	.65	-.81	1736.7	.59	-.81	1736.8	1.11	-.80
1736.2	-.23	-.80	1736.7	.55	-.80	1736.6	.44	-.79
1736.3	-.87	-.78	1736.3	-.15	-.78	1736.5	.62	-.77
1737.0	.93	-.77	1736.7	.80	-.77	1736.3	-.14	-.76
1736.8	.57	-.74	1736.7	-.11	-.73	1736.9	.90	-.71
1735.7	-.71	-.71	1735.4	.12	-.71	1736.9	.64	-.70
1736.4	.28	-.69	1736.8	.79	-.69	1736.8	1.07	-.68
1736.8	.52	-.68	1736.3	-.29	-.67	1736.3	-.20	-.66
1736.1	-.45	-.65	1736.7	1.10	-.65	1736.4	-.05	-.65
1736.4	.41	-.64	1735.6	-.90	-.63	1736.8	.58	-.63
1736.8	.88	-.61	1736.5	.08	-.61	1734.8	-.15	-.60
1736.8	.50	-.59	1735.6	-.72	-.58	1736.7	.64	-.58
1736.8	.59	-.58	1736.5	.22	-.56	1736.8	.87	-.55
1736.7	.77	-.55	1735.9	-.19	-.54	1736.2	-.23	-.53
1736.7	.38	-.53	1736.4	-.30	-.52	1736.7	.65	-.52
1736.3	-.13	-.51	1736.6	1.06	-.50	1736.5	-.08	-.50
1736.3	-.50	-.49	1736.7	.75	-.49	1735.6	-.76	-.49
1736.7	.51	-.49	1735.9	-.32	-.48	1736.7	.85	-.47
1736.7	.05	-.45	1736.6	.54	-.44	1736.6	.35	-.43
1735.8	-.50	-.42	1736.5	.01	-.41	1736.5	-.60	-.39
1736.7	.74	-.39	1736.7	.04	-.39	1736.6	-.61	-.38
1736.6	-.53	-.38	1736.3	-.33	-.38	1736.6	1.02	-.37
1736.7	.85	-.36	1736.0	-.52	-.36	1736.6	.59	-.35
1736.5	.17	-.35	1736.7	-.20	-.34	1736.6	-.55	-.34
1736.7	-.09	-.34	1736.0	-.57	-.34	1736.7	.45	-.34
1735.7	-.80	-.32	1736.2	-.59	-.32	1735.4	-.17	-.30
1735.8	-.28	-.30	1736.7	.55	-.29	1736.9	-.55	-.29
1736.7	.74	-.29	1736.3	-.34	-.28	1736.9	.01	-.28
1736.7	.49	-.28	1736.5	-.29	-.27	1735.7	-.80	-.26
1736.8	.52	-.26	1736.7	.84	-.26	1736.7	.15	-.26
1736.8	-.20	-.25	1736.5	1.03	-.24	1736.6	.31	-.24
1736.7	.44	-.23	1737.1	-.14	-.22	1736.6	.02	-.22
1737.0	-.55	-.20	1736.7	.72	-.20	1736.6	.59	-.20
1736.7	.50	-.20	1737.0	-.20	-.20	1736.5	1.00	-.17
1736.0	-.39	-.17	1736.5	.30	-.15	1736.7	.60	-.15
1736.6	.79	-.14	1737.2	.11	-.13	1738.3	-.29	-.09
1736.7	.10	-.09	1736.6	.43	-.08	1736.7	.80	-.07
1736.8	.68	-.05	1737.1	.44	-.05	1736.7	.97	-.04
1738.9	.12	-.04	1736.7	.57	-.04	1737.4	.56	-.01
1737.7	.50	.02	1736.7	.96	.05	1737.4	.48	.07
1736.9	.63	.11						

LUNAR ORBITER PHOTOGRAPHIC SITE II P 10AB

1734.8	2.85	-27.98	1736.5	3.57	-27.91	1735.1	2.98	-27.91
1734.9	2.84	-27.90	1735.9	3.40	-27.90	1736.3	3.71	-27.87
1735.0	3.13	-27.82	1736.9	3.83	-27.82	1736.2	3.39	-27.81
1736.1	3.27	-27.80	1739.9	3.96	-27.77	1736.0	2.97	-27.77
1736.1	3.54	-27.77	1736.2	3.67	-27.75	1736.2	3.22	-27.75
1736.2	3.37	-27.74	1736.4	3.82	-27.74	1736.9	4.26	-27.74
1736.1	3.12	-27.72	1736.1	2.82	-27.72	1736.2	3.53	-27.71
1736.9	4.24	-27.69	1736.7	4.39	-27.68	1736.3	3.96	-27.68
1736.1	2.96	-27.67	1736.0	2.80	-27.67	1736.2	3.37	-27.66
1736.3	3.64	-27.66	1736.1	3.24	-27.65	1736.5	3.81	-27.64
1736.6	4.37	-27.63	1736.4	4.10	-27.62	1736.3	3.50	-27.60
1736.3	3.36	-27.59	1736.2	3.09	-27.58	1737.0	4.24	-27.58
1736.1	2.93	-27.58	1735.9	2.78	-27.56	1736.5	3.79	-27.56
1736.5	4.37	-27.55	1736.3	3.63	-27.54	1736.1	3.19	-27.54
1736.2	3.49	-27.53	1736.5	4.06	-27.52	1736.2	3.32	-27.52
1736.6	4.23	-27.52	1736.0	2.92	-27.48	1736.3	3.76	-27.47
1736.6	4.21	-27.47	1736.2	3.31	-27.47	1736.1	3.06	-27.46
1736.0	3.18	-27.46	1736.2	3.61	-27.46	1736.2	3.46	-27.45
1737.8	3.91	-27.43	1736.5	4.07	-27.42	1736.7	4.34	-27.41
1736.5	4.19	-27.40	1736.2	3.32	-27.40	1735.9	2.89	-27.38
1736.5	4.03	-27.38	1736.0	3.18	-27.37	1736.3	3.73	-27.37
1736.2	3.44	-27.37	1736.3	2.74	-27.36	1735.9	3.01	-27.34
1736.5	4.18	-27.32	1736.3	3.87	-27.32	1736.0	3.29	-27.31
1736.6	4.32	-27.31	1736.4	4.02	-27.29	1736.1	3.43	-27.27
1736.1	3.58	-27.27	1736.5	4.31	-27.26	1736.5	4.17	-27.26
1736.2	3.73	-27.25	1735.8	2.87	-27.25	1736.0	3.13	-27.23
1736.2	3.26	-27.21	1736.4	3.99	-27.21	1736.6	4.29	-27.21
1738.4	3.85	-27.21	1735.9	2.69	-27.20	1735.8	3.00	-27.20
1735.9	3.14	-27.19	1736.5	4.14	-27.17	1736.1	3.42	-27.17
1735.7	2.85	-27.17	1736.1	3.55	-27.16	1736.4	3.98	-27.14
1736.2	3.71	-27.14	1735.7	2.69	-27.13	1738.6	3.83	-27.12
1735.8	3.11	-27.12	1736.5	4.27	-27.11	1738.2	3.82	-27.09
1736.0	3.40	-27.09	1735.9	3.24	-27.08	1735.6	2.96	-27.08

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.4	3.98	-27.08	1735.7	2.82	-27.08	1736.4	4.11	-27.07
1736.2	3.53	-27.07	1735.2	2.66	-27.06	1736.5	4.25	-27.03
1735.7	3.08	-27.03	1735.6	2.95	-27.02	1735.9	3.38	-27.02
1738.0	3.81	-27.01	1736.1	3.51	-27.01	1735.8	3.22	-26.98
1736.4	3.95	-26.98	1736.0	3.37	-26.98	1735.7	3.07	-26.97
1736.1	3.67	-26.96	1736.4	4.10	-26.96	1735.2	2.64	-26.96
1737.4	3.80	-26.95	1735.7	2.94	-26.94	1735.7	2.79	-26.94
1736.0	3.49	-26.94	1735.8	3.07	-26.92	1735.5	2.95	-26.91
1736.4	4.09	-26.90	1736.5	4.23	-26.89	1735.5	2.92	-26.89
1735.9	3.35	-26.88	1735.2	2.63	-26.88	1736.1	3.63	-26.87
1736.4	3.94	-26.87	1736.0	3.47	-26.86	1735.8	3.19	-26.84
1735.5	2.93	-26.84	1736.6	3.77	-26.83	1736.4	4.08	-26.82
1736.4	3.91	-26.82	1735.2	4.24	-26.81	1735.6	3.06	-26.81
1735.9	3.33	-26.80	1736.0	3.44	-26.76	1736.3	4.08	-26.76
1736.4	3.90	-26.75	1735.7	3.18	-26.74	1735.3	2.62	-26.73
1735.6	3.02	-26.72	1735.3	2.89	-26.72	1736.0	3.60	-26.71
1736.3	3.75	-26.70	1736.4	4.18	-26.69	1735.7	3.32	-26.68
1735.2	2.72	-26.68	1735.9	3.43	-26.67	1735.1	2.59	-26.67
1736.2	3.88	-26.66	1736.4	4.05	-26.65	1735.2	2.88	-26.65
1735.6	3.15	-26.65	1735.5	3.00	-26.62	1736.4	4.16	-26.62
1735.9	3.41	-26.60	1736.0	3.56	-26.59	1736.3	3.87	-26.59
1735.0	2.73	-26.57	1735.2	2.85	-26.57	1736.3	4.04	-26.57
1736.1	3.72	-26.56	1735.5	2.98	-26.56	1735.4	3.13	-26.55
1735.2	2.55	-26.54	1735.9	3.40	-26.53	1736.4	4.14	-26.52
1736.3	3.84	-26.51	1735.3	2.85	-26.51	1735.0	2.69	-26.50
1735.6	3.29	-26.49	1736.0	3.54	-26.47	1735.3	3.12	-26.47
1736.0	3.39	-26.46	1736.3	4.02	-26.46	1734.5	2.66	-26.44
1736.0	3.68	-26.41	1734.8	2.54	-26.40	1735.9	3.53	-26.39
1735.0	2.81	-26.39	1736.2	3.99	-26.38	1736.2	3.82	-26.37
1735.4	3.24	-26.36	1735.8	3.51	-26.34	1736.3	4.11	-26.34
1736.1	3.65	-26.33	1736.3	3.99	-26.32	1733.8	2.66	-26.32
1736.2	3.81	-26.31	1734.9	2.79	-26.31	1735.8	3.35	-26.30
1735.8	3.65	-26.25	1736.1	3.98	-26.24	1736.3	4.08	-26.22
1735.9	3.78	-26.21						

LUNAR ORBITER PHOTOGRAPHIC SITE III P10

1734.8	1.34	-42.99	1734.7	1.51	-42.93	1735.0	1.32	-42.88
1735.1	1.62	-42.87	1735.3	1.79	-42.84	1735.0	1.44	-42.84
1735.8	1.89	-42.83	1735.1	1.29	-42.80	1735.8	2.02	-42.79
1735.3	1.60	-42.79	1734.8	1.41	-42.77	1735.8	1.87	-42.76
1735.2	1.55	-42.72	1735.2	1.53	-42.71	1735.1	1.40	-42.71
1735.6	2.27	-42.71	1735.7	1.83	-42.69	1735.7	1.29	-42.69
1735.3	2.42	-42.66	1735.4	1.12	-42.66	1735.4	1.38	-42.64
1735.5	1.99	-42.64	1735.8	2.58	-42.62	1735.0	1.11	-42.62
1735.7	1.26	-42.62	1735.9	1.92	-42.61	1735.9	2.04	-42.61
1735.5	1.53	-42.59	1735.6	1.69	-42.59	1735.4	1.15	-42.59
1735.4	2.08	-42.57	1735.2	2.25	-42.57	1735.5	1.93	-42.57
1735.2	2.02	-42.55	1735.6	1.06	-42.55	1735.5	1.94	-42.55
1735.4	1.81	-42.53	1735.6	2.39	-42.52	1735.6	1.90	-42.51
1735.4	2.08	-42.51	1735.5	1.66	-42.51	1735.6	2.55	-42.51
1735.5	1.97	-42.50	1735.4	1.13	-42.50	1735.7	1.25	-42.50
1735.5	1.36	-42.49	1735.1	2.24	-42.49	1735.6	1.51	-42.48
1735.4	1.98	-42.47	1735.6	1.05	-42.47	1735.5	1.88	-42.47
1735.5	1.48	-42.45	1735.4	2.00	-42.44	1735.6	1.02	-42.43
1735.7	1.23	-42.43	1735.3	2.22	-42.42	1735.5	1.64	-42.42
1735.5	1.13	-42.42	1735.7	1.79	-42.42	1735.6	1.34	-42.41
1735.5	1.63	-42.37	1735.5	2.01	-42.37	1735.7	1.77	-42.37
1735.5	1.94	-42.37	1735.6	.98	-42.36	1735.5	1.33	-42.36
1735.0	2.21	-42.35	1735.6	1.47	-42.35	1735.5	1.22	-42.35
1735.5	1.87	-42.34	1735.5	1.06	-42.34	1735.5	1.95	-42.29
1735.7	2.31	-42.29	1735.5	.98	-42.29	1735.6	1.10	-42.28
1735.4	1.94	-42.27	1735.5	1.90	-42.27	1735.5	1.92	-42.26
1735.5	1.92	-42.26	1735.5	1.61	-42.25	1735.3	1.89	-42.24
1735.1	1.90	-42.24	1735.6	2.00	-42.24	1735.7	2.00	-42.23
1735.5	1.19	-42.23	1735.6	1.45	-42.22	1735.6	1.88	-42.22
1735.5	2.16	-42.21	1735.5	.97	-42.21	1735.6	1.86	-42.20
1735.6	2.48	-42.20	1735.6	1.30	-42.20	1735.7	1.75	-42.19
1735.8	1.58	-42.19	1735.6	2.00	-42.18	1735.7	1.89	-42.17
1735.6	2.01	-42.17	1735.7	1.87	-42.16	1735.5	.94	-42.16
1735.6	2.01	-42.15	1735.6	1.42	-42.15	1735.6	1.91	-42.15
1735.6	1.99	-42.15	1735.6	1.98	-42.14	1735.6	1.98	-42.14
1734.1	1.84	-42.14	1735.6	2.31	-42.13	1735.6	1.27	-42.13
1735.5	1.87	-42.13	1735.6	2.01	-42.12	1735.6	1.72	-42.11
1735.5	.95	-42.11	1735.6	2.17	-42.10	1735.5	1.16	-42.09
1735.5	1.83	-42.09	1735.5	1.95	-42.09	1735.7	1.06	-42.09
1735.5	2.02	-42.08	1735.5	1.89	-42.08	1735.6	1.97	-42.08
1735.5	1.58	-42.07	1735.6	2.30	-42.07	1735.6	.89	-42.06
1735.6	1.99	-42.06	1735.6	1.40	-42.05	1735.6	1.70	-42.03
1735.6	1.00	-42.03	1735.5	1.81	-42.03	1735.6	.93	-42.03
1735.5	1.24	-42.02	1735.7	2.47	-42.02	1735.6	2.12	-42.01
1735.6	1.93	-42.00	1735.6	.96	-42.00	1735.7	.86	-42.00
1735.6	1.83	-41.99	1735.5	1.14	-41.98	1735.6	.99	-41.98
1735.6	1.02	-41.97	1735.5	2.26	-41.96	1735.6	1.90	-41.96
1735.6	1.23	-41.95	1735.7	2.12	-41.95	1735.5	2.00	-41.94
1735.5	.95	-41.94	1735.5	1.69	-41.94	1735.7	2.44	-41.94
1735.5	1.77	-41.94	1735.6	1.37	-41.93	1735.5	1.82	-41.91
1735.6	1.92	-41.91	1735.6	.99	-41.89	1735.5	1.99	-41.89
1735.6	1.85	-41.88	1735.6	1.52	-41.88	1735.6	1.22	-41.88
1735.6	.86	-41.87	1735.6	1.10	-41.86	1735.7	2.10	-41.86

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.5	1.68	-41.86	1735.6	2.41	-41.85	1735.6	1.35	-41.83
1735.6	2.08	-41.83	1735.7	.82	-41.83	1735.6	1.76	-41.83
1735.6	1.89	-41.82	1735.5	1.51	-41.82	1735.6	.92	-41.82
1735.6	1.20	-41.81	1735.5	1.81	-41.81	1735.7	1.96	-41.80
1735.4	2.21	-41.79	1735.6	.96	-41.79	1735.7	1.08	-41.78
1735.6	.91	-41.77	1735.6	1.86	-41.76	1735.5	1.64	-41.76
1735.5	1.94	-41.75	1735.6	.77	-41.74	1735.5	1.73	-41.74
1735.5	1.35	-41.73	1735.6	1.18	-41.73	1735.7	.84	-41.71
1735.6	2.08	-41.71	1735.6	1.80	-41.71	1735.5	1.89	-41.70
1735.5	1.91	-41.70	1735.5	1.62	-41.69	1734.9	.91	-41.69
1735.5	2.19	-41.68	1735.6	1.49	-41.67	1735.6	.89	-41.66
1735.7	1.31	-41.66	1735.6	1.75	-41.66	1735.6	1.07	-41.66
1735.5	1.93	-41.66	1735.6	1.18	-41.65	1735.3	1.82	-41.65
1735.5	.76	-41.64	1735.5	1.64	-41.64	1735.6	.95	-41.62
1735.5	1.87	-41.62	1735.5	2.39	-41.62	1735.5	1.48	-41.62
1735.6	1.05	-41.61	1735.5	1.82	-41.61	1735.6	1.80	-41.61
1735.6	.83	-41.60	1735.5	2.17	-41.59	1735.6	2.05	-41.58
1735.6	1.30	-41.57	1735.7	1.92	-41.57	1735.5	.76	-41.56
1735.6	1.72	-41.56	1735.7	.85	-41.55	1735.5	1.85	-41.55
1735.6	1.80	-41.54	1735.7	1.61	-41.54	1735.6	.92	-41.53
1735.5	1.02	-41.53	1735.6	1.44	-41.52	1735.8	.86	-41.51
1735.5	1.87	-41.51	1735.6	1.15	-41.50	1735.5	1.77	-41.50
1735.6	1.29	-41.47	1735.4	.73	-41.47	1735.6	1.70	-41.46
1735.6	1.58	-41.45	1735.3	2.04	-41.45	1735.5	1.88	-41.45
1735.7	.84	-41.44	1735.3	1.78	-41.44	1735.5	1.45	-41.43
1735.6	.88	-41.42	1735.5	1.84	-41.41	1735.5	1.10	-41.40
1735.6	.98	-41.40	1735.6	.81	-41.39	1735.8	.77	-41.39
1735.5	2.12	-41.39	1735.5	.68	-41.39	1735.5	2.02	-41.39
1735.6	1.68	-41.35	1735.5	1.44	-41.35	1735.6	.66	-41.35
1735.5	1.74	-41.34	1735.5	.86	-41.34	1735.6	1.57	-41.33
1735.6	1.26	-41.33	1735.5	1.11	-41.33	1735.4	1.85	-41.32
1735.6	1.66	-41.32	1735.5	1.72	-41.31	1735.5	1.99	-41.30
1735.5	.77	-41.30	1735.7	.81	-41.30	1735.5	1.54	-41.28
1735.5	1.19	-41.28	1735.2	.68	-41.27	1735.6	1.76	-41.27
1735.5	1.80	-41.25	1735.6	.84	-41.24	1735.5	1.38	-41.24
1735.6	1.66	-41.23	1735.5	1.99	-41.23	1735.7	.94	-41.22
1735.5	1.73	-41.22	1735.8	.73	-41.21	1735.5	1.80	-41.20
1735.5	1.22	-41.19	1735.6	1.67	-41.19	1735.5	1.51	-41.19
1735.5	2.07	-41.19	1735.5	1.70	-41.17	1735.8	1.37	-41.17
1735.5	1.65	-41.17	1735.4	1.67	-41.16	1735.4	2.08	-41.15
1735.6	1.62	-41.15	1735.5	1.73	-41.14	1735.9	1.04	-41.13
1735.5	1.77	-41.13	1735.5	1.95	-41.13	1735.4	1.67	-41.10
1735.5	1.72	-41.10	1735.6	1.81	-41.10	1736.2	1.51	-41.09
1735.5	2.06	-41.08	1735.4	1.66	-41.06	1735.5	1.75	-41.05
1735.5	1.37	-41.03	1735.7	1.60	-41.02	1735.7	1.76	-41.02
1736.3	1.46	-41.00	1735.5	1.71	-41.00	1735.8	1.18	-40.98
1735.4	2.04	-40.96	1735.6	1.58	-40.96	1735.6	1.94	-40.95
1735.6	1.79	-40.93	1735.4	2.04	-40.93	1735.7	1.66	-40.91
1735.4	1.62	-40.91	1735.9	1.69	-40.91	1737.4	1.88	-40.90
1735.7	1.76	-40.88	1736.0	1.46	-40.87	1735.1	1.59	-40.85
1736.2	1.99	-40.83	1735.8	1.55	-40.82	1735.3	1.76	-40.79
1735.5	1.64	-40.77						

LUNAR ORBITER PHOTOGRAPHIC SITE I P 8.1

1737.1	-3.59	-37.56	1741.9	-3.20	-37.38	1736.6	-3.62	-37.34
1736.3	-3.01	-37.33	1736.3	-3.39	-37.33	1736.1	-3.07	-37.32
1736.1	-2.36	-37.30	1737.1	-3.23	-37.29	1736.6	-2.58	-37.28
1736.0	-2.99	-37.27	1735.9	-2.72	-37.26	1736.2	-3.09	-37.23
1736.8	-3.04	-37.23	1736.2	-2.91	-37.23	1735.8	-2.97	-37.20
1736.7	-2.58	-37.20	1735.5	-3.10	-37.19	1736.2	-3.42	-37.19
1735.7	-2.38	-37.18	1736.1	-2.80	-37.16	1736.0	-3.26	-37.15
1735.9	-3.01	-37.14	1736.3	-3.64	-37.14	1736.0	-2.96	-37.13
1736.0	-3.43	-37.13	1736.3	-3.67	-37.10	1736.0	-3.29	-37.10
1735.6	-2.57	-37.08	1736.2	-3.67	-37.06	1735.8	-2.78	-37.06
1735.9	-3.04	-37.06	1735.8	-3.13	-37.06	1736.4	-3.67	-37.05
1735.6	-2.41	-37.04	1736.1	-3.46	-37.03	1735.9	-2.96	-37.02
1735.9	-2.83	-37.02	1735.8	-2.65	-37.01	1735.9	-3.29	-37.01
1736.0	-3.14	-37.00	1735.7	-2.46	-36.98	1736.1	-3.70	-36.97
1735.9	-3.32	-36.96	1735.8	-3.08	-36.94	1735.8	-3.02	-36.93
1736.0	-3.46	-36.91	1735.7	-3.14	-36.91	1736.1	-3.51	-36.89
1735.6	-2.81	-36.87	1735.8	-3.11	-36.87	1736.0	-3.72	-36.86
1735.9	-3.35	-36.85	1735.4	-2.62	-36.85	1735.8	-3.02	-36.83
1735.9	-3.49	-36.81	1735.7	-3.07	-36.81	1735.6	-2.47	-36.81
1735.7	-3.18	-36.81	1735.8	-3.11	-36.78	1735.8	-2.86	-36.76
1735.9	-3.04	-36.76	1736.0	-3.53	-36.74	1735.9	-3.74	-36.73
1734.9	-3.35	-36.73	1735.7	-3.14	-36.72	1735.7	-3.08	-36.71
1735.6	-3.22	-36.70	1735.4	-2.67	-36.70	1736.0	-3.77	-36.68
1735.7	-3.09	-36.68	1735.4	-2.49	-36.66	1735.6	-3.19	-36.63
1735.7	-3.05	-36.63	1735.6	-2.90	-36.62	1736.0	-3.76	-36.62
1735.9	-3.54	-36.61	1735.4	-2.52	-36.57	1735.9	-3.75	-36.55
1735.4	-2.71	-36.55	1735.7	-3.56	-36.54	1735.6	-3.09	-36.54
1735.6	-3.14	-36.53	1735.5	-3.23	-36.48	1735.8	-3.79	-36.47
1735.6	-2.90	-36.46	1736.3	-2.73	-36.45	1734.8	-3.39	-36.44
1735.4	-2.55	-36.43	1736.1	-3.18	-36.43	1735.5	-3.25	-36.41
1735.9	-3.80	-36.40	1735.5	-3.09	-36.40	1735.7	-3.56	-36.39
1735.5	-3.19	-36.38	1735.5	-2.90	-36.38	1735.5	-3.20	-36.37
1735.6	-3.25	-36.32	1735.1	-2.71	-36.30	1735.1	-2.56	-36.30
1735.5	-3.11	-36.29	1733.9	-3.43	-36.29	1735.9	-3.83	-36.29
1735.4	-2.94	-36.29	1735.7	-3.59	-36.28	1735.5	-3.17	-36.28

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.5	-2.95	-36.23	1735.2	-2.74	-36.22	1735.6	-3.22	-36.21
1735.5	-3.43	-36.20	1735.5	-3.29	-36.20	1735.3	-2.94	-36.20
1735.6	-3.46	-36.19	1735.9	-3.84	-36.18	1735.2	-2.54	-36.18
1735.5	-3.17	-36.17	1735.5	-3.21	-36.17	1735.3	-2.78	-36.15
1735.7	-3.64	-36.14	1735.4	-2.97	-36.14	1735.5	-3.29	-36.14
1735.2	-2.76	-36.08	1735.3	-2.96	-36.08	1736.0	-3.86	-36.06
1735.5	-3.20	-36.05	1735.6	-3.66	-36.02	1735.6	-3.31	-36.02
1735.7	-3.50	-36.02	1736.1	-3.88	-36.00	1735.3	-3.01	-35.99
1735.6	-3.33	-35.98	1735.6	-3.67	-35.97	1735.1	-2.63	-35.97
1735.2	-3.01	-35.94	1735.5	-3.90	-35.93	1735.4	-3.29	-35.92
1735.4	-3.49	-35.92	1735.1	-2.83	-35.92	1735.7	-3.68	-35.91
1734.6	-3.01	-35.90	1735.4	-3.50	-35.90	1735.3	-3.30	-35.88
1735.3	-3.22	-35.87	1735.2	-3.03	-35.87	1735.1	-2.62	-35.86
1735.0	-2.82	-35.86	1735.4	-3.51	-35.86	1735.3	-3.37	-35.84
1735.4	-3.25	-35.81	1735.4	-3.31	-35.80	1734.9	-3.03	-35.80
1735.9	-3.68	-35.80	1735.3	-3.38	-35.78	1735.2	-2.65	-35.78
1735.6	-3.55	-35.78	1735.6	-3.38	-35.73	1734.8	-2.86	-35.73
1735.7	-3.34	-35.72	1735.3	-3.25	-35.70	1734.9	-3.04	-35.69
1735.4	-3.53	-35.67	1735.5	-2.68	-35.66	1735.5	-3.37	-35.65
1735.5	-3.28	-35.65	1735.6	-2.87	-35.64	1734.9	-3.05	-35.62
1735.4	-2.87	-35.56	1735.5	-2.70	-35.52			

LUNAR ORBITER PHOTOGRAPHIC SITE II P 2

1736.3	2.27	33.18	1736.4	2.20	33.20	1735.9	2.42	33.21
1736.3	2.29	33.23	1736.2	2.52	33.24	1736.2	2.66	33.27
1735.9	2.60	33.28	1736.2	2.26	33.29	1736.4	2.15	33.31
1736.7	2.69	33.31	1736.2	2.41	33.32	1736.3	2.26	33.32
1736.3	2.75	33.33	1736.2	2.83	33.34	1736.3	2.59	33.35
1736.3	2.51	33.35	1736.1	2.80	33.36	1736.3	2.95	33.38
1736.5	2.89	33.38	1736.4	2.26	33.39	1736.3	2.78	33.39
1736.5	2.67	33.40	1736.3	2.72	33.40	1736.2	3.15	33.40
1736.3	2.84	33.40	1736.4	2.16	33.41	1736.2	3.22	33.41
1736.4	2.49	33.42	1736.3	2.41	33.42	1736.4	2.68	33.42
1736.3	2.56	33.42	1736.5	2.88	33.43	1736.3	2.64	33.44
1736.2	3.32	33.44	1736.4	2.77	33.44	1736.3	2.75	33.45
1736.3	3.11	33.45	1736.3	2.36	33.45	1736.7	3.03	33.46
1736.3	2.63	33.47	1736.4	2.92	33.47	1736.3	2.35	33.48
1736.4	2.48	33.48	1736.3	2.59	33.49	1736.4	2.92	33.49
1736.2	3.13	33.49	1736.4	2.23	33.49	1736.3	2.87	33.49
1736.4	2.14	33.50	1736.3	2.69	33.50	1736.2	2.81	33.50
1736.3	3.19	33.50	1736.5	2.11	33.52	1736.4	2.77	33.53
1736.2	2.61	33.54	1736.4	2.69	33.54	1736.5	2.99	33.54
1736.4	2.79	33.55	1736.5	2.45	33.56	1736.5	2.85	33.56
1736.5	2.73	33.56	1736.5	2.91	33.57	1736.2	3.09	33.58
1736.4	2.82	33.58	1736.5	2.44	33.59	1736.5	2.60	33.60
1736.6	2.13	33.61	1736.5	2.34	33.62	1736.4	3.17	33.62
1736.5	2.65	33.62	1736.3	3.28	33.63	1736.4	2.88	33.63
1736.6	2.21	33.63	1736.4	2.99	33.63	1736.5	2.77	33.64
1736.5	2.74	33.65	1736.5	2.62	33.67	1736.4	3.18	33.67
1736.5	2.42	33.67	1736.4	2.74	33.67	1736.6	2.11	33.68
1736.4	3.09	33.68	1736.5	2.34	33.68	1736.5	2.71	33.68
1736.6	2.89	33.69	1736.5	2.81	33.69	1736.5	2.69	33.69
1736.5	2.83	33.70	1736.5	2.19	33.70	1736.6	2.07	33.70
1736.5	2.62	33.71	1736.5	2.87	33.71	1736.4	2.78	33.71
1736.5	2.71	33.72	1736.5	2.97	33.73	1736.5	3.26	33.73
1736.5	2.67	33.73	1736.5	3.14	33.73	1736.6	2.16	33.73
1736.6	2.53	33.74	1736.4	2.74	33.74	1736.5	3.08	33.75
1736.6	2.86	33.75	1736.5	2.39	33.75	1736.5	2.80	33.75
1736.4	2.71	33.76	1736.5	2.18	33.76	1736.5	2.59	33.77
1736.4	2.57	33.77	1736.5	2.85	33.78	1736.4	2.70	33.78
1736.5	3.05	33.78	1736.5	2.65	33.79	1736.8	2.08	33.79
1736.4	2.74	33.79	1736.5	3.25	33.80	1736.5	2.85	33.80
1736.8	2.18	33.81	1736.4	2.96	33.81	1736.5	2.79	33.81
1736.7	2.29	33.81	1736.5	2.60	33.82	1736.4	2.70	33.82
1736.4	2.66	33.83	1736.7	2.40	33.83	1736.5	3.12	33.84
1736.8	2.14	33.84	1736.8	2.33	33.84	1736.9	2.07	33.85
1736.5	2.82	33.86	1736.4	2.74	33.86	1736.5	3.23	33.86
1736.5	2.93	33.87	1736.5	3.11	33.88	1736.7	2.64	33.88
1736.6	2.55	33.88	1736.7	2.72	33.88	1736.5	3.11	33.88
1736.7	2.28	33.90	1736.7	2.38	33.90	1736.7	2.77	33.90
1735.9	2.13	33.90	1736.6	2.69	33.91	1736.6	2.50	33.91
1736.7	2.94	33.92	1736.7	2.82	33.93	1736.7	2.60	33.93
1737.7	2.05	33.93	1736.7	2.73	33.94	1736.7	2.38	33.95
1737.4	2.04	33.96	1736.7	3.09	33.96	1736.7	3.00	33.96
1736.7	2.93	33.97	1736.7	2.71	33.97	1736.7	2.63	33.98
1736.8	2.75	33.98	1736.8	2.35	33.99	1736.8	2.56	33.99
1736.7	2.79	34.00	1736.8	2.26	34.01	1736.8	2.12	34.01
1736.8	3.19	34.01	1736.8	2.68	34.02	1736.8	2.60	34.02
1737.0	2.02	34.02	1736.8	2.90	34.03	1736.7	2.48	34.03
1736.8	3.00	34.04	1736.8	3.08	34.04	1736.8	2.36	34.04
1736.8	2.64	34.05	1736.8	2.24	34.05	1736.8	2.70	34.06
1736.4	2.34	34.07	1735.4	2.78	34.07	1736.9	2.81	34.07
1736.8	2.56	34.07	1736.8	2.73	34.08	1736.8	2.46	34.08
1736.9	2.88	34.09	1736.9	2.99	34.10	1736.8	2.54	34.10
1736.9	2.34	34.11	1736.8	2.62	34.11	1736.7	2.49	34.11
1736.9	2.68	34.11	1736.9	2.10	34.12	1736.9	2.00	34.12
1736.8	2.45	34.12	1736.9	3.15	34.13	1736.9	2.72	34.13
1736.9	2.59	34.14	1736.9	2.87	34.14	1736.7	2.25	34.15
1737.1	2.65	34.15	1736.9	2.72	34.16	1736.9	2.97	34.16

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.9	2.79	34.16	1736.9	2.33	34.16	1736.1	2.63	34.17
1737.0	2.09	34.17	1736.9	3.04	34.17	1736.8	2.57	34.18
1736.8	2.51	34.18	1736.8	2.47	34.19	1736.9	2.21	34.20
1736.9	2.95	34.20	1736.9	3.17	34.21	1736.9	2.76	34.22
1736.8	2.51	34.22	1736.9	2.73	34.22	1736.9	3.03	34.22
1736.9	2.67	34.23	1737.0	2.33	34.23	1736.9	2.63	34.23
1737.0	1.98	34.24	1737.1	2.86	34.24	1736.9	2.57	34.25
1736.9	2.71	34.26	1737.0	2.85	34.26	1737.0	2.45	34.27
1737.0	2.22	34.27	1737.0	2.07	34.28	1737.0	2.64	34.28
1736.9	2.58	34.28	1736.9	2.75	34.29	1736.9	2.44	34.29
1737.0	3.14	34.30	1737.0	2.51	34.30	1737.0	2.19	34.30
1737.0	2.66	34.31	1737.0	2.70	34.31	1737.1	1.96	34.31
1737.0	2.28	34.31	1736.9	2.57	34.31	1736.9	3.02	34.32
1736.9	2.43	34.33	1737.0	2.49	34.34	1737.0	2.19	34.34
1737.1	2.06	34.35	1737.0	2.81	34.35	1737.0	3.13	34.35
1737.0	2.57	34.35	1736.9	2.72	34.36	1737.0	2.63	34.36
1737.0	3.01	34.36	1737.0	2.67	34.36	1737.1	2.44	34.36
1737.0	2.49	34.38	1736.1	2.28	34.38	1737.2	3.12	34.40
1737.0	2.91	34.40	1737.1	2.04	34.40	1737.0	2.70	34.41
1737.1	2.17	34.41	1736.4	2.81	34.42	1737.6	1.93	34.42
1737.1	2.60	34.42	1737.0	3.02	34.43	1737.0	2.48	34.44
1737.0	2.55	34.44	1737.1	3.11	34.44	1737.2	2.28	34.45
1737.1	2.65	34.45	1737.1	2.63	34.46	1737.1	2.42	34.46
1737.1	1.93	34.47	1737.2	2.02	34.47	1737.1	2.80	34.48
1737.1	2.90	34.48	1737.2	2.26	34.50	1737.0	2.69	34.50
1737.5	3.13	34.50	1737.2	2.15	34.50	1737.1	2.51	34.51
1737.3	2.44	34.51	1737.2	2.02	34.52	1737.0	2.78	34.52
1737.1	2.55	34.53	1737.2	2.39	34.54	1737.1	2.86	34.54
1737.1	2.62	34.54	1737.2	2.99	34.55	1737.3	1.91	34.55
1737.1	2.70	34.56	1737.1	2.48	34.58	1737.1	3.05	34.59
1737.1	2.65	34.59	1737.2	2.57	34.59	1737.1	2.96	34.59
1737.3	2.13	34.59	1737.2	2.24	34.60	1737.2	2.77	34.60
1737.3	3.08	34.62	1737.1	2.68	34.62	1737.1	2.51	34.62
1737.1	2.87	34.62	1737.4	2.37	34.63	1737.1	2.95	34.64
1737.3	1.97	34.64	1737.1	2.66	34.64	1737.2	2.47	34.64
1737.2	2.58	34.64	1737.2	2.75	34.65	1737.2	2.61	34.66
1737.3	2.41	34.66	1737.0	2.20	34.66	1737.9	1.88	34.67
1737.4	2.11	34.67	1737.2	2.55	34.68	1737.2	2.41	34.68
1737.1	2.96	34.68	1737.1	2.85	34.69	1737.2	2.46	34.69
1737.2	3.05	34.70	1737.2	2.74	34.70	1737.3	2.39	34.70
1737.2	2.56	34.70	1737.2	2.20	34.71	1737.2	2.65	34.71
1737.1	2.61	34.72	1737.2	2.47	34.73	1737.4	2.10	34.75
1737.1	2.93	34.75	1737.2	2.85	34.75	1737.2	2.74	34.75
1737.1	2.19	34.75	1737.2	2.65	34.76	1737.5	1.95	34.76
1736.9	2.38	34.76	1737.4	2.45	34.76	1737.1	2.18	34.77
1737.4	2.59	34.77	1737.3	3.03	34.77	1737.4	2.34	34.78
1736.5	2.51	34.79	1737.1	2.91	34.80	1737.2	2.19	34.80
1737.1	2.23	34.81	1737.4	2.19	34.81	1737.2	2.72	34.81
1737.1	3.03	34.81	1736.5	2.39	34.82	1737.2	2.83	34.82
1737.3	2.55	34.82	1737.3	2.63	34.83	1737.1	2.43	34.83
1737.3	2.60	34.84	1737.0	2.92	34.85	1737.7	2.80	34.86
1736.8	2.51	34.86	1737.3	3.01	34.89	1737.1	3.01	34.93
1738.0	2.79	34.93	1737.0	2.89	34.95			

LUNAR ORBITER PHOTOGRAPHIC SITE V 27AB

1737.1	.32	-2.60	1737.0	.01	-2.60	1736.9	-.19	-2.60
1737.3	.24	-2.57	1737.0	.55	-2.57	1737.2	.35	-2.54
1736.7	-.36	-2.52	1737.0	-.21	-2.51	1737.1	.74	-2.50
1737.0	.26	-2.45	1737.0	-.00	-2.44	1738.2	-.40	-2.44
1736.3	.22	-2.44	1737.2	.35	-2.43	1735.1	.31	-2.42
1737.1	.89	-2.41	1736.7	-.25	-2.40	1737.1	.53	-2.40
1736.9	-.40	-2.39	1736.8	.70	-2.39	1736.8	.55	-2.38
1736.8	.88	-2.36	1736.8	-.03	-2.36	1736.5	.54	-2.34
1736.8	.19	-2.31	1736.6	.88	-2.30	1736.6	-.05	-2.29
1736.5	-.02	-2.29	1736.7	.23	-2.29	1736.7	.18	-2.28
1736.5	.52	-2.28	1736.6	.68	-2.28	1736.6	-.44	-2.28
1736.5	.68	-2.25	1736.5	.17	-2.24	1736.6	.23	-2.22
1736.8	.29	-2.22	1736.5	-.30	-2.21	1736.6	-.06	-2.21
1736.6	.16	-2.19	1736.4	.49	-2.18	1736.5	.84	-2.16
1736.3	-.07	-2.15	1736.8	.20	-2.11	1737.2	.26	-2.10
1736.6	.66	-2.09	1736.6	.12	-2.06	1736.5	.19	-2.06
1736.4	.85	-2.05	1736.6	.48	-2.05	1736.5	.91	-2.04
1736.7	.24	-2.03	1736.7	-.31	-2.03	1736.5	.62	-2.02
1736.5	1.02	-2.01	1736.6	1.03	-1.98	1736.4	-.09	-1.98
1737.0	.97	-1.95	1736.3	.80	-1.95	1736.4	.44	-1.95
1736.8	.93	-1.94	1736.6	.17	-1.94	1736.4	.09	-1.94
1736.6	.88	-1.93	1736.1	-.33	-1.93	1736.6	.93	-1.92
1736.5	.21	-1.92	1736.9	1.08	-1.90	1736.4	-.09	-1.89
1736.5	-.51	-1.88	1736.7	.94	-1.87	1736.7	1.18	-1.86
1736.3	.99	-1.86	1736.4	.42	-1.86	1736.3	.59	-1.86
1736.6	-.13	-1.85	1736.5	.16	-1.85	1736.5	-.10	-1.84
1736.8	.77	-1.84	1736.8	.96	-1.83	1736.5	.08	-1.82
1736.5	.24	-1.82	1736.7	1.04	-1.81	1736.6	.41	-1.80
1736.9	1.18	-1.79	1736.4	.87	-1.78	1736.7	1.06	-1.77
1736.4	-.14	-1.76	1736.5	.05	-1.74	1736.9	.94	-1.73
1736.4	.74	-1.72	1736.8	1.18	-1.70	1736.6	.39	-1.69
1736.3	.73	-1.68	1736.6	.83	-1.67	1736.4	.52	-1.65
1736.5	1.05	-1.63	1736.5	.11	-1.63	1736.2	.03	-1.62
1736.5	.95	-1.61	1736.3	.16	-1.60	1736.0	-.43	-1.60

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1736.4	.87	-1.58	1736.7	.69	-1.57	1736.7	1.15	-1.57
1736.2	.83	-1.56	1736.2	.77	-1.54	1736.2	1.02	-1.53
1736.6	-.14	-1.53	1736.4	.32	-1.52	1735.9	-.62	-1.51
1736.3	.66	-1.51	1736.2	.08	-1.51	1736.1	.76	-1.50
1736.5	.47	-1.50	1736.2	.18	-1.49	1736.2	.12	-1.49
1736.2	-.45	-1.47	1736.2	-.02	-1.47	1736.7	1.14	-1.46
1736.4	1.16	-1.42	1736.2	.19	-1.41	1736.6	.68	-1.41
1736.5	1.01	-1.40	1736.4	.47	-1.39	1736.2	.05	-1.38
1736.4	.83	-1.38	1736.2	.13	-1.35	1736.3	-.05	-1.35
1736.6	-.21	-1.35	1736.3	.78	-1.34	1736.0	.72	-1.33
1736.1	.30	-1.33	1736.2	.97	-1.32	1735.2	.71	-1.31
1735.6	-.65	-1.30	1736.3	.83	-1.30	1736.0	.46	-1.30
1735.8	-.51	-1.27	1736.2	-.19	-1.26	1736.5	1.11	-1.25
1736.3	.82	-1.24	1736.2	.97	-1.24	1736.2	.76	-1.24
1736.1	.14	-1.24	1736.1	.05	-1.24	1736.1	-.03	-1.22
1736.0	.63	-1.22	1736.0	.09	-1.20	1736.2	.69	-1.19
1736.5	1.11	-1.19	1736.0	-.08	-1.18	1736.0	.76	-1.17
1736.2	.94	-1.17	1736.7	1.09	-1.14	1736.0	.75	-1.12
1736.1	.67	-1.12	1736.1	-.53	-1.11	1736.3	.92	-1.11
1735.9	-.25	-1.11	1735.8	-.09	-1.10	1735.4	1.06	-1.10
1736.0	.41	-1.09	1735.8	.23	-1.08	1736.2	.10	-1.07
1736.3	1.08	-1.05	1735.9	.94	-1.05	1736.1	.57	-1.04
1736.0	.65	-1.04	1736.0	.71	-1.04	1735.9	.02	-1.03
1735.4	-.71	-1.03	1736.0	.23	-1.02	1736.1	.38	-1.01
1736.0	.75	-1.00	1735.5	-.30	-.96	1736.3	1.04	-.96
1736.2	.92	-.95	1736.2	.63	-.94	1736.1	.06	-.93
1735.9	.73	-.93	1735.9	-.06	-.92	1735.7	-.74	-.91
1735.5	-.14	-.91	1735.6	-.55	-.90	1735.9	.21	-.90
1735.9	1.01	-.89	1735.9	.37	-.88	1735.9	.89	-.88
1735.8	.74	-.86	1735.9	.89	-.83	1736.2	.66	-.82
1735.9	.74	-.82	1735.8	-.15	-.82	1736.0	.63	-.81
1735.8	-.07	-.80	1736.3	1.01	-.79	1735.9	.88	-.78
1735.8	-.06	-.78	1735.8	.65	-.75	1735.9	-.03	-.75
1736.0	.98	-.73	1735.9	.20	-.73	1736.2	.72	-.72
1736.0	.36	-.71	1735.7	-.20	-.69	1735.6	-.12	-.68
1735.5	-.37	-.66	1735.8	.03	-.66	1736.1	.49	-.66
1735.9	.66	-.64	1736.2	.96	-.63	1735.9	.16	-.63
1735.8	-.05	-.62	1735.7	.58	-.61	1736.1	.72	-.60
1736.0	.67	-.60	1735.8	.30	-.57	1735.8	.95	-.57
1735.7	.85	-.57	1735.9	-.11	-.56	1735.9	-.14	-.55
1735.8	.46	-.54	1735.3	-.81	-.54	1735.8	-.22	-.54
1735.9	.73	-.54	1735.9	-.05	-.53	1735.5	-.00	-.51
1735.9	.83	-.51	1735.5	-.41	-.51	1735.8	.59	-.51
1735.9	-.23	-.51	1735.9	.73	-.47	1735.8	.62	-.46
1735.8	.43	-.45	1735.6	-.41	-.44	1735.8	.69	-.43
1735.9	.82	-.41	1735.7	-.51	-.40	1735.7	.13	-.40
1735.7	-.24	-.40	1735.7	-.44	-.39	1735.6	-.52	-.39
1735.8	.93	-.38	1735.6	-.43	-.37	1735.7	.26	-.37
1735.6	.67	-.37	1735.8	-.08	-.36	1735.7	-.12	-.36
1735.7	-.01	-.36	1735.5	.54	-.35	1735.8	-.07	-.33
1735.7	-.53	-.33	1735.8	-.19	-.32	1735.6	.64	-.32
1735.5	.63	-.31	1735.8	.82	-.30	1735.6	-.25	-.30
1735.7	.09	-.30	1735.5	.57	-.29	1735.7	-.20	-.29
1735.7	.23	-.28	1735.5	-.42	-.27	1736.0	-.83	-.27
1735.2	-.12	-.26	1735.6	.39	-.25	1735.5	.52	-.25
1735.7	-.85	-.22	1735.6	.80	-.22	1735.7	-.46	-.21
1735.5	.68	-.21	1735.6	.58	-.21	1735.6	-.12	-.21
1735.6	-.21	-.20	1734.9	-.73	-.19	1735.6	-.30	-.19
1735.5	.38	-.17	1735.7	.68	-.17	1735.9	.87	-.15
1736.2	-.21	-.15	1735.5	.07	-.14	1735.6	.20	-.14
1736.2	-.48	-.14	1735.7	.49	-.13	1735.6	-.32	-.12
1735.6	.51	-.10	1735.6	-.12	-.09	1735.7	-.22	-.09
1735.7	.88	-.09	1735.3	-.32	-.07	1734.9	-.49	-.07
1735.5	.77	-.07	1735.6	.52	-.06	1735.7	.36	-.06
1735.6	-.19	-.06	1735.4	.65	-.05	1735.4	.18	-.03
1735.7	-.16	-.03	1735.4	-.23	-.03	1735.6	-.27	-.03
1735.4	.05	-.02	1735.4	.64	-.02	1735.2	.63	-.01
1735.3	.58	.02	1735.3	.42	.03	1735.6	.32	.04
1735.5	.83	.09	1735.6	.71	.10			

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1735.6	.27	23.42	1736.1	.61	23.48	1735.8	.38	23.49
1736.0	.66	23.52	1735.9	.72	23.53	1735.9	.86	23.53
1736.0	.60	23.54	1735.6	.24	23.54	1736.0	.69	23.56
1736.0	.68	23.57	1735.6	.38	23.58	1735.0	1.34	23.59
1735.8	.62	23.59	1735.9	.83	23.59	1735.6	.21	23.60
1735.7	.61	23.60	1735.8	1.15	23.61	1735.7	.67	23.61
1735.6	.64	23.62	1735.7	.68	23.63	1735.9	1.54	23.64
1735.9	.77	23.64	1735.7	.73	23.64	1735.6	.74	23.65
1735.7	.68	23.65	1735.7	.80	23.65	1735.7	.54	23.65
1735.9	1.70	23.66	1736.0	.64	23.67	1735.7	.71	23.67
1735.9	.68	23.68	1735.8	.66	23.68	1735.9	.89	23.68
1735.8	1.53	23.68	1735.8	1.14	23.68	1735.7	.60	23.70
1735.5	.66	23.70	1735.6	.80	23.70	1735.8	.74	23.70
1735.7	.71	23.70	1735.7	.60	23.70	1735.8	1.31	23.71
1736.0	.77	23.71	1735.6	1.13	23.72	1735.7	.60	23.72
1735.7	.77	23.73	1735.8	1.71	23.74	1735.6	.68	23.75
1735.5	.35	23.75	1735.6	.64	23.76	1735.6	1.30	23.78
1735.4	.19	23.78	1735.5	.73	23.79	1735.8	1.47	23.79

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.5	.67	23.79	1735.6	.61	23.80	1735.4	.75	23.80
1735.4	.82	23.81	1735.0	.61	23.82	1735.7	.49	23.82
1735.5	.64	23.82	1735.5	.63	23.82	1735.8	1.71	23.83
1735.5	.68	23.85	1735.4	1.68	23.85	1735.5	.73	23.85
1735.6	1.48	23.85	1735.4	.77	23.86	1735.4	.14	23.86
1735.5	.72	23.87	1735.5	.64	23.88	1735.4	.62	23.88
1735.5	1.28	23.88	1735.5	.65	23.89	1735.4	.84	23.89
1735.5	.70	23.89	1735.4	.66	23.90	1735.6	1.47	23.90
1735.5	.69	23.90	1735.4	1.06	23.90	1735.4	1.28	23.94
1734.8	.76	23.94	1735.4	.61	23.94	1735.4	1.69	23.95
1735.4	.71	23.95	1735.5	1.47	23.95	1735.5	.49	23.97
1735.3	.82	23.97	1735.3	.30	23.99	1735.2	1.08	24.00
1735.4	.84	24.02	1735.2	.79	24.03	1734.7	1.66	24.06
1735.1	.73	24.07	1735.3	.86	24.07	1735.3	.81	24.08
1735.3	.10	24.08	1734.6	.44	24.09	1735.2	.57	24.12
1735.2	1.06	24.12	1735.2	.77	24.12	1735.5	1.44	24.14
1735.3	.73	24.16	1735.1	1.23	24.16	1735.3	1.61	24.18
1735.3	.76	24.18	1735.2	1.01	24.21	1735.3	.42	24.21
1735.4	.06	24.21	1735.3	.26	24.22	1735.1	.85	24.22
1735.1	.75	24.24	1735.1	.54	24.24	1735.2	1.20	24.24
1735.4	.76	24.26	1735.2	.70	24.26	1735.3	1.37	24.28
1735.3	1.02	24.28	1734.9	.53	24.31	1733.6	.88	24.32
1735.0	.75	24.32	1735.0	.75	24.34	1735.0	.89	24.34
1735.1	.21	24.34	1735.0	.89	24.35	1735.2	1.60	24.36
1735.2	.04	24.36	1735.1	1.02	24.37	1735.1	1.17	24.39
1735.0	.50	24.41	1735.1	.72	24.43	1735.1	.37	24.43
1735.0	.93	24.46	1735.0	.98	24.47	1735.2	1.36	24.48
1735.1	1.57	24.50	1735.1	.15	24.50	1735.3	-.01	24.50
1735.0	.66	24.51	1735.1	.77	24.51	1734.9	.47	24.53
1735.1	1.32	24.53	1735.1	.35	24.56	1735.3	.00	24.58
1735.0	1.53	24.59	1735.0	1.12	24.61	1734.9	.46	24.61
1735.0	.96	24.62	1734.9	.98	24.63	1735.0	.33	24.63
1735.2	.60	24.64	1734.9	.45	24.64	1735.1	.15	24.66
1734.9	.68	24.67	1734.9	1.28	24.68	1735.3	-.04	24.69
1734.8	.44	24.70	1734.8	.92	24.71	1734.9	1.28	24.71
1734.7	1.52	24.72	1734.7	.76	24.72	1734.7	.70	24.73
1734.8	1.09	24.74	1734.7	.55	24.75	1734.6	.32	24.76
1734.7	1.26	24.76	1734.8	.74	24.77	1735.2	-.05	24.77
1734.6	.67	24.78	1734.8	.58	24.79	1734.7	1.49	24.80
1735.2	.11	24.81	1734.8	1.04	24.81	1734.4	1.12	24.83
1734.7	.29	24.84	1734.9	.40	24.84	1734.8	1.27	24.84
1734.8	.76	24.85	1734.7	1.48	24.86	1734.6	.39	24.87
1734.7	.76	24.87	1735.2	.11	24.88	1734.7	.50	24.88
1734.6	.91	24.88	1734.9	.58	24.88	1734.7	.68	24.88
1734.7	1.28	24.89	1734.5	.39	24.90	1734.8	.76	24.90
1735.0	.08	24.91	1735.5	.39	24.91	1735.5	.86	24.92
1734.7	1.24	24.93	1734.4	.63	24.94	1734.5	.77	24.95
1734.8	1.24	24.96	1735.0	.78	24.96	1734.7	.39	24.97
1734.2	1.44	24.99	1735.0	.77	25.00	1734.8	1.24	25.00
1734.7	.86	25.02	1734.8	1.23	25.03	1734.8	.79	25.04
1734.7	1.22	25.04	1734.4	1.03	25.05	1734.6	.66	25.05
1734.8	.78	25.07	1734.9	1.22	25.08	1734.9	1.22	25.10
1734.9	1.21	25.13	1735.1	1.25	25.15			

LUNAR ORBITER PHOTOGRAPHIC SITE V 14

1734.6	21.28	27.60	1732.1	21.02	27.61	1734.2	21.90	27.62
1734.2	22.48	27.63	1734.2	21.98	27.65	1734.3	22.26	27.69
1734.2	22.73	27.69	1734.0	22.34	27.73	1734.5	23.26	27.78
1732.8	20.91	27.79	1733.1	20.73	27.81	1733.9	21.64	27.88
1734.4	21.27	27.90	1733.8	21.47	27.90	1734.0	22.28	27.93
1734.1	22.65	27.95	1733.9	22.15	27.95	1734.0	21.98	27.96
1734.0	22.51	28.00	1734.1	22.43	28.00	1734.2	23.02	28.01
1734.3	23.31	28.04	1733.9	21.34	28.25	1732.5	20.84	28.28
1734.2	21.23	28.29	1734.0	21.50	28.34	1734.1	21.57	28.35
1734.2	21.63	28.37	1734.4	21.91	28.40	1734.1	22.03	28.40
1734.1	22.25	28.41	1734.3	23.11	28.44	1734.3	22.48	28.46
1734.0	22.79	28.47	1734.4	23.00	28.49	1734.3	22.95	28.49
1734.5	23.38	28.51	1733.4	20.91	28.64	1733.1	20.66	28.66
1734.3	21.07	28.66	1734.0	21.35	28.71	1733.9	21.49	28.72
1734.1	22.36	28.77	1735.3	21.66	28.77	1734.2	22.12	28.79
1734.5	21.92	28.82	1734.2	22.03	28.84	1734.7	22.17	28.84
1734.4	22.89	28.85	1734.5	23.15	28.86	1734.1	22.50	28.86
1734.3	22.77	28.86	1734.2	22.31	28.87	1734.6	23.24	28.87
1733.8	20.64	28.97	1734.9	20.98	29.00	1736.2	21.27	29.02
1732.7	20.74	29.06	1731.8	20.88	29.07	1733.4	20.62	29.08
1734.4	21.55	29.10	1737.1	21.21	29.12	1734.4	22.24	29.14
1733.7	20.69	29.15	1734.4	21.81	29.16	1737.3	23.13	29.20
1734.3	22.03	29.22	1735.4	21.23	29.23	1734.6	23.02	29.24
1734.4	21.89	29.24	1735.1	21.56	29.27	1734.9	23.07	29.28
1734.5	22.76	29.29	1736.2	21.24	29.29	1734.5	22.88	29.31
1734.9	21.43	29.33	1734.3	20.65	29.34	1736.9	22.29	29.35
1735.2	23.09	29.37	1734.9	22.68	29.38	1734.3	20.61	29.40
1734.8	22.30	29.41	1734.9	21.78	29.43	1736.8	21.30	29.44
1734.9	23.29	29.45	1735.6	22.74	29.45	1735.1	23.38	29.45
1735.7	21.20	29.46	1734.7	21.64	29.46	1734.7	23.19	29.47
1733.9	21.06	29.50	1734.6	22.00	29.50	1733.9	20.61	29.51
1735.1	22.16	29.54	1735.6	20.99	29.54	1735.0	21.94	29.55
1734.8	22.92	29.56	1735.7	20.99	29.58	1734.8	22.31	29.58
1735.0	21.93	29.59	1735.0	22.06	29.59	1735.1	21.39	29.61

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.2	21.83	29.65	1735.1	22.84	29.68	1734.9	22.32	29.68
1735.5	22.32	29.72	1734.3	20.60	29.72	1735.9	22.72	29.73
1734.8	23.22	29.76	1734.3	20.78	29.77	1734.5	21.07	29.79
1735.4	23.07	29.79	1734.9	23.36	29.80	1734.9	22.95	29.81
1735.4	20.92	29.82	1734.9	21.40	29.86	1734.9	21.50	29.87
1734.9	21.94	29.89	1734.9	21.45	29.89	1734.8	22.00	29.93
1734.9	22.13	29.93	1735.0	22.28	29.94	1734.7	22.70	29.98
1734.9	22.45	30.00	1734.9	23.04	30.02	1735.2	23.28	30.07
1734.8	22.87	30.09	1734.3	20.90	30.18	1734.4	20.47	30.19
1735.1	21.24	30.22	1735.1	21.14	30.23	1736.9	21.01	30.26
1735.1	21.25	30.26	1735.3	21.09	30.26	1735.5	21.62	30.32
1735.0	21.90	30.34	1735.0	22.20	30.34	1735.1	21.76	30.34
1734.8	22.44	30.39	1734.9	22.64	30.44	1736.2	20.57	30.64
1735.5	21.36	30.65	1735.2	20.76	30.65	1737.0	21.12	30.66
1735.5	21.33	30.67	1735.4	21.81	30.69	1735.3	21.40	30.73
1735.0	22.40	30.78	1735.3	21.90	30.80	1735.0	22.16	30.83
1735.1	22.15	30.85	1735.4	22.66	30.87	1736.3	20.83	30.89
1735.5	20.66	30.90	1737.2	21.22	30.91	1735.5	22.84	30.91
1735.0	20.92	30.96	1736.9	21.38	30.98	1736.9	21.86	30.99
1735.9	22.17	31.03	1735.8	22.17	31.08			
			LUNAR ORBITER PHOTOGRAPHIC SITE V 22					
1736.6	19.49	7.73	1736.6	20.48	7.82	1736.5	20.98	7.82
1735.7	21.91	7.84	1736.6	20.63	7.85	1735.5	21.04	7.85
1735.9	21.74	7.85	1736.8	20.29	7.85	1736.9	21.47	7.86
1736.3	19.78	7.86	1736.9	20.03	7.89	1735.2	22.32	7.97
1736.3	19.42	8.16	1737.0	19.61	8.24	1737.0	19.90	8.24
1737.1	19.82	8.25	1737.1	19.98	8.26	1736.6	21.43	8.31
1736.4	21.66	8.31	1737.3	20.89	8.31	1737.0	21.09	8.32
1735.3	22.13	8.36	1737.7	20.74	8.37	1735.6	21.95	8.40
1736.5	21.77	8.43	1736.2	19.68	8.61	1736.7	19.52	8.67
1735.0	19.86	8.69	1735.5	19.99	8.71	1737.5	20.64	8.72
1736.9	21.40	8.77	1737.4	20.80	8.79	1735.4	22.03	8.82
1736.6	21.08	8.82	1736.6	21.04	8.83	1737.6	20.82	8.83
1736.5	21.48	8.84	1735.0	19.88	8.95	1735.7	19.60	9.07
1736.1	21.12	9.08	1736.0	20.86	9.09	1735.6	19.99	9.11
1734.7	20.26	9.11	1734.8	20.13	9.12	1736.0	21.64	9.13
1735.4	19.89	9.13	1735.0	21.83	9.14	1735.7	20.81	9.16
1734.5	20.10	9.16	1734.7	20.25	9.17	1735.4	19.80	9.17
1734.7	20.34	9.17	1735.4	20.63	9.18	1735.4	21.49	9.19
1735.8	21.04	9.19	1735.0	21.35	9.19	1735.1	20.64	9.22
1735.3	22.10	9.24	1734.7	20.26	9.24	1735.5	20.83	9.24
1735.3	20.89	9.24	1735.2	19.82	9.25	1735.0	21.65	9.25
1734.9	21.21	9.27	1734.8	20.47	9.29	1734.7	21.24	9.35
1735.4	20.79	9.36	1734.4	21.33	9.37	1734.0	21.98	9.39
1734.4	21.51	9.41	1735.4	19.53	9.46	1735.5	19.73	9.50
1735.0	20.09	9.52	1735.0	20.46	9.54	1734.8	20.79	9.55
1734.8	20.71	9.55	1734.7	21.05	9.62	1734.7	20.90	9.64
1734.8	21.13	9.65	1734.7	21.34	9.66	1733.9	21.82	9.67
1734.0	21.86	9.69	1734.4	21.71	9.70	1734.4	22.00	9.73
1736.7	19.49	9.86	1736.1	19.75	9.89	1735.9	19.95	9.91
1736.6	19.47	9.92	1736.1	19.61	9.93	1735.0	20.30	9.94
1735.2	20.09	9.94	1735.0	20.47	9.97	1735.1	20.59	9.99
1734.5	20.83	10.04	1734.4	21.33	10.05	1734.3	21.05	10.06
1734.5	20.96	10.06	1734.4	21.58	10.07	1733.8	21.85	10.13
1737.0	19.41	10.46	1735.2	19.77	10.50	1735.6	19.56	10.50
1735.5	19.96	10.51	1736.0	19.51	10.54	1735.0	20.40	10.56
1734.7	20.24	10.57	1735.1	19.97	10.60	1734.7	20.66	10.64
1734.6	20.98	10.67	1734.6	21.28	10.73	1734.8	21.53	10.73
1734.6	21.71	10.80						
			LUNAR ORBITER PHOTOGRAPHIC SITE V 16AB					
1736.3	.41	22.62	1736.2	.63	22.65	1736.3	.87	22.66
1736.3	1.02	22.67	1736.3	1.22	22.70	1736.3	1.54	22.70
1736.1	.50	22.84	1736.1	.60	22.85	1736.4	.32	22.85
1736.4	1.41	22.89	1736.0	1.15	22.90	1736.0	.89	22.91
1736.2	1.78	22.94	1736.1	.31	23.03	1735.9	.45	23.06
1736.0	.63	23.06	1735.7	1.01	23.06	1736.0	.93	23.09
1735.9	1.55	23.15	1736.2	1.33	23.15	1736.5	1.84	23.16
1735.9	.29	23.16	1735.8	.55	23.20	1735.8	.44	23.20
1735.7	.30	23.23	1735.8	.55	23.25	1735.8	.73	23.29
1735.8	1.35	23.32	1735.8	1.24	23.35	1735.8	1.51	23.36
1736.0	1.87	23.38	1736.1	1.73	23.38	1735.7	.33	23.40
1735.7	.68	23.47	1735.8	.44	23.47	1735.6	.71	23.50
1735.7	.92	23.51	1735.5	.66	23.52	1735.5	.30	23.53
1735.5	.74	23.54	1735.5	.44	23.57	1735.5	1.39	23.57
1735.4	.88	23.57	1735.4	.67	23.59	1735.3	.73	23.59
1735.7	1.60	23.62	1736.1	.83	23.63	1736.0	.74	23.64
1735.2	.60	23.64	1735.8	1.77	23.65	1735.4	.71	23.66
1736.4	.74	23.66	1735.3	.94	23.66	1735.4	1.59	23.66
1735.3	1.20	23.66	1735.4	.66	23.68	1735.4	.86	23.68
1735.4	.65	23.69	1735.6	1.37	23.69	1735.3	.91	23.70
1735.5	1.77	23.72	1735.2	.41	23.73	1735.2	.69	23.75
1735.2	1.36	23.76	1735.2	.25	23.77	1735.5	.79	23.77
1735.3	1.53	23.77	1735.4	.81	23.78	1735.1	.55	23.80
1735.4	.68	23.80	1736.0	1.77	23.81	1736.1	1.76	23.83
1735.2	.74	23.83	1735.5	.83	23.84	1735.6	1.54	23.84
1734.9	.83	23.84	1735.2	.21	23.85	1735.4	.68	23.86

APPENDIX

RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)	RADIUS (KM)	LAT (DEG)	LONG (DEG)
1735.2	1.34	23.87	1735.1	.90	23.87	1735.3	1.53	23.88
1735.1	1.12	23.89	1735.2	.83	23.93	1735.2	.67	23.93
1735.5	1.75	23.93	1735.2	1.53	23.94	1735.3	.55	23.95
1735.1	.88	23.95	1735.2	.36	23.97	1735.2	1.50	23.98
1735.3	1.14	23.98	1735.1	.90	24.00	1735.1	.85	24.01
1735.1	1.51	24.06	1735.1	.92	24.06	1735.2	.87	24.07
1735.0	.16	24.07	1735.0	.51	24.07	1735.1	.63	24.10
1735.1	.83	24.11	1735.1	1.11	24.11	1735.4	1.50	24.12
1735.0	.79	24.14	1735.2	1.29	24.14	1735.6	1.67	24.16
1735.4	.82	24.16	1735.0	.48	24.19	1734.8	1.07	24.19
1735.0	.33	24.20	1735.1	.91	24.21	1735.0	.60	24.22
1734.9	.81	24.22	1735.4	1.26	24.22	1735.6	.76	24.24
1734.9	.82	24.24	1735.0	1.07	24.27	1735.4	.59	24.28
1734.9	.94	24.30	1735.4	1.66	24.34	1735.3	1.08	24.35
1735.4	1.22	24.37	1734.8	.56	24.39	1734.9	.78	24.41
1734.9	.44	24.42	1735.1	.99	24.44	1734.9	1.04	24.45
1734.8	1.41	24.46	1734.9	.22	24.48	1734.8	.06	24.48
1734.8	.72	24.48	1735.0	.83	24.49	1734.9	.54	24.51
1734.8	1.37	24.52	1734.7	.07	24.56	1735.7	1.58	24.57
1735.2	1.18	24.59	1735.2	1.04	24.60	1734.8	1.02	24.60
1735.0	.40	24.60	1734.8	.67	24.62	1734.6	.52	24.62
1735.0	.74	24.64	1734.6	.22	24.65	1735.3	1.33	24.66
1734.6	.02	24.67	1734.8	.98	24.69	1735.3	1.34	24.69
1734.9	.82	24.70	1734.8	.76	24.71	1734.9	1.15	24.72
1734.7	.61	24.73	1734.7	.39	24.74	1734.9	1.32	24.74
1734.7	.02	24.75	1734.6	.73	24.76	1735.3	1.54	24.78
1734.9	1.10	24.79	1734.7	.17	24.79	1734.7	1.17	24.81
1734.7	.36	24.81	1734.8	.47	24.81	1735.2	1.32	24.81
1734.9	.82	24.83	1733.9	1.54	24.84	1734.9	.82	24.84
1735.0	.56	24.85	1735.0	.74	24.85	1734.8	.97	24.85
1735.0	.64	24.85	1734.6	.17	24.86	1734.6	.15	24.89
1735.4	1.29	24.90	1735.0	.93	24.90	1734.7	.76	24.90
1734.6	.70	24.91	1734.6	.59	24.92	1734.9	1.30	24.93
1734.7	.45	24.94	1734.9	.84	24.94	1734.4	.32	24.95
1733.7	1.49	24.97	1734.9	1.29	24.97	1734.8	.92	24.99
1734.8	1.29	25.00	1734.6	1.28	25.01	1734.4	.32	25.01
1734.8	1.09	25.02	1734.4	.72	25.02	1734.4	.55	25.02
1735.1	1.27	25.05	1734.3	.62	25.06	1734.7	1.28	25.07
1734.5	1.06	25.09	1734.4	.27	25.09	1734.4	.88	25.10
1734.6	1.27	25.10	1734.4	.11	25.11	1734.5	1.31	25.13
1734.6	.89	25.13	1734.5	.29	25.18	1734.2	.07	25.20
1734.6	.86	25.23	1734.5	1.22	25.28	1734.1	-.12	25.28
1734.0	.04	25.31	1734.0	.25	25.35	1734.0	.03	25.36
1734.0	.22	25.42	1735.0	1.19	25.45	1734.3	.05	25.45
1734.3	.97	25.60						

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